Southern Medical Association, Forty-Eighth Annual Meeting
St. Louis, Missouri, November 8-11

VOLUME 47 APRIL 1954 NUMBER 4

Southern Medical Journal

Journal of the Southern Medical Association

Copyright, Southern Medical Association, 1954. Published monthly by the Southern Medical Association, Empire Building, Birmingham 3, Alabama. Annual subscription $10.00. Entered as Second-Class Matter at the Post Office at Birmingham, Alabama, under Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized December 20, 1921.

TABLE OF CONTENTS

Cesarean Section: Another Technic of Low Cervical with Extraperitoneal Drainage. Guy T. Vise, Meridian, Mississippi 293

Discussed by James H. Byram, Atlanta, Georgia.

Correction of Peripheral Paralysis of the Facial Nerve by Hypoglossal-Facial Anastomosis. Eben Alexander, Jr., and Courtland H. Davis, Jr., Winston-Salem, North Carolina 299

Discussed by James G. Lyerly, Jacksonville, Florida; William R. Chambers, Atlanta, Georgia.

Spontaneous Regression of Neoplasms: An Experimental Study in the Duck. R. H. Rigdon, Galveston, Texas 303

Discussed by Béla Halpert, Houston, Texas; McKenzie P. Moore, Jr., Charleston, South Carolina.

The Larynx and Pharynx Radiologically Considered. R. P. O'Bannon and Otto H. Grunow, Fort Worth, Texas 310

Discussed by William Wright Bryan, Atlanta, Georgia.

Extreme Eosinophilia in Childhood: Report of Cases. M. Hines Roberts, Atlanta, Georgia 317

Discussed by Walter H. Sheldon, Atlanta, Georgia; G. A. Shawkey, Charleston, West Virginia; S. J. Kranson, Independence, Missouri.

Some Advances in Pediatric Anesthesia. Thomas S. Griggs, Miami, Florida, and John Adriani, New Orleans, Louisiana 323

Present Day Treatment of Asthmatic Patients. Mason I. Lowance, Atlanta, Georgia 327

Bronchial and Cardiac Asthma: Similarities and Differences. Eugene B. Ferris, Atlanta, Georgia 330

Papers of Dr. Mason I. Lowance and Dr. Eugene B. Ferris discussed by George W. Owen, Jackson, Mississippi; Maurice S. Segal, Boston, Massachusetts; Henry D. Ogden, New Orleans, Louisiana.

Initial Prognosis in Acute Myocardial Infarction. Martin S. Belle, Morton M. Halpern and Louis Lemberg, Miami, Florida 334

Discussed by E. Sterling Nichol, Miami, Florida; Paul D. Camp, Richmond, Virginia.

Provision of Medical Services for Small Industries. Lester M. Petrie, Atlanta, Georgia 338

Discussed by Richard M. Adams, Shreveport, Louisiana; Edward M. Gunn, Hartsville, South Carolina; G. U. Dernehl, Texas City, Texas.

Coordinated Health Services of Community Hospitals and Local Health Agencies in Georgia. R. C. Williams, Atlanta, Georgia 342

Discussed by Clarence L. Guyton, Columbia, South Carolina; T. F. Sellers, Atlanta, Georgia; Ben F. Wyman, Columbia, South Carolina; J. W. R. Norton, Raleigh, North Carolina.

Continued on next page

TABLE OF CONTENTS

Continued

Traumatic Paraplegia: A Classification and Fifteen-Year Follow-Up. Ralph W. Coonrad and Edward S. Whitesides, Durham, North Carolina 350

Discussed by Paul L. Reith, Atlanta, Georgia; J. A. Conroy, Nashville, Tennessee; William M. Deverle, Richmond, Virginia; Harriet E. Gillette, Atlanta, Georgia.

Primary Carcinoma of the Vagina. Leonard Palumbo, Jr., Chapel Hill, North Carolina 356

ACTH and Cortisone in Relation to Surgery and Anesthesia. John L. Simmons, Chapel Hill, North Carolina 362

The Treatment of Benign Tumors of the Colon and Rectum. W. W. Green, Toledo, Ohio 365

Late Treatment of Severe Extensive Burns. T. G. Blocker, Jr., Clifford C. Snyder and Stephen R. Lewis, Galveston, Texas 371

Discussed by Donald W. Smith, Miami, Florida.

Clinical Approach to the Whole Child: Case Report. C. Christopher Morris, II, Galveston, Texas 375

Discussed by William G. Crook, Jackson, Tennessee; Carroll M. Pounders, Oklahoma City, Oklahoma; Margaret Mary Nicholson, Washington, D. C.; W. C. Verdery, Fayetteville, North Carolina.

A Suggested Plan for Undergraduate Dermatological Teaching. Thomas W. Murrell, Richmond, Virginia 379

Discussed by Herbert S. Alden, Atlanta, Georgia; Paul G. Reque, Birmingham, Alabama; H. M. Robinson, Sr., Baltimore, Maryland; J. Fred Mullins, Galveston, Texas.

EDITORIALS 382

- Toxicity of the Newer Anti-Hypertensive Drugs
- Male Hormone Therapy and Tumors of the Prostate
- Cigarette Smoking and Cancer of the Lungs
- Twenty-Five Years Ago

BOOK REVIEWS 384

BOOKS RECEIVED 387

SOUTHERN MEDICAL NEWS 388

MINUTES, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953 391

Mayo Clinic Diet Manual

By The Committee on Dietetics of the Mayo Clinic

Here is the New (2nd) Edition of the book which gives you the specific, easy-to-find information you need in prescribing special diets for your patients. The revision is based on the latest information on food and vitamins, and on current dietary practice at the Mayo Clinic. For each diet described there is an explanation of composition, adequacy, foods to be included and excluded, sample menus (using household measures), etc. Included among the new features are changes in the following dietary programs: Diets following gastric surgery, following colostomy, ileostomy, or resection of the bowel, for sprue, hyperlipoidemia, cardiorenal vascular diseases, obesity, diabetes, infants.

New (2nd) Edition! **247 pages** **$5.50**

SEND ORDERS TO

J. A. MAJORS COMPANY

New Orleans 12 **Dallas 1** **Atlanta 3**

TULANE UNIVERSITY

SCHOOL OF MEDICINE

DIVISION OF GRADUATE MEDICINE

Basic Science course in Ophthalmology
Twelve months, beginning — July 5th

Basic Science as applied to Orthopedics
Five months, beginning — September 6th

Tropical Medicine and Public Health, leading to the degree of Master of Public Health and Master of Public Health (Tropical Medicine), Nine months, beginning — September 20th

Postgraduate Medical Trainee
An informal program of study for practicing physicians in clinical departments of Tulane University School of Medicine for periods of from one week to one year.

For detailed information write

DIRECTOR

1430 Tulane Avenue — New Orleans 12, La.

FOR A BALANCED PROGRAM OF **PARENTERAL NUTRITION**

5 NEW

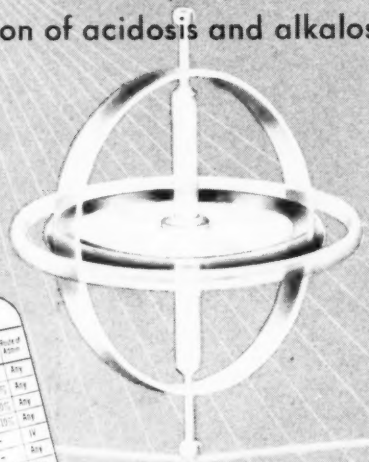
Travert® 10%-Electrolyte solutions

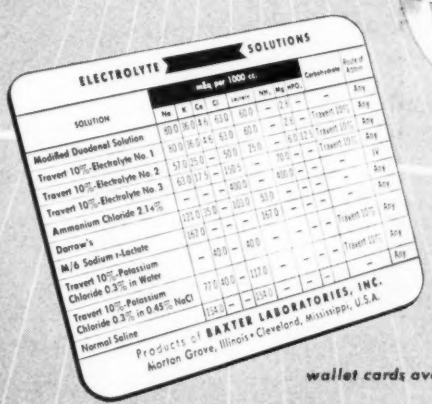
all the advantages of TRAVERT 10%

twice as many calories as 5% dextrose, in equal infusion time, with no increase in fluid volume . . . a greater protein-sparing action as compared to dextrose . . . maintenance of hepatic function

PLUS

replacement of electrolytes,
and correction of acidosis and alkalosis





wallet cards available on request

products of

BAXTER LABORATORIES, INC.

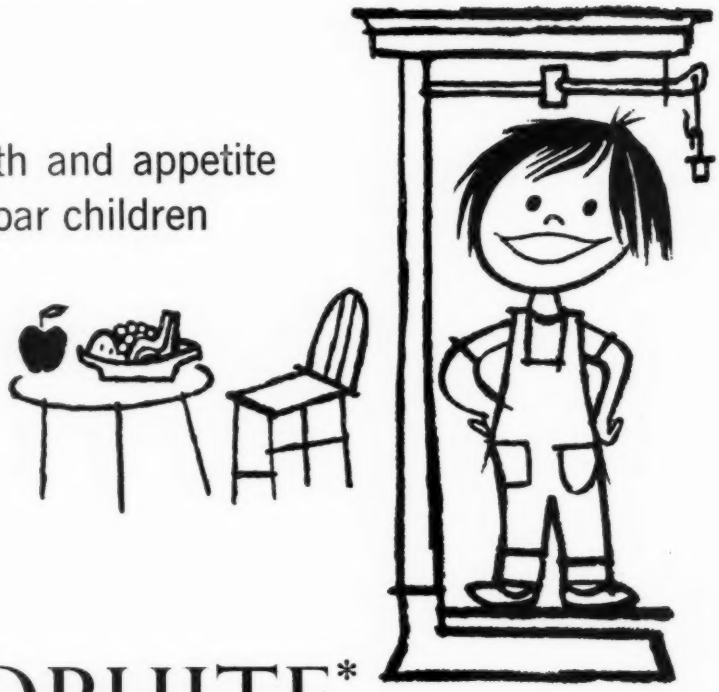
Morton Grove, Illinois • Cleveland, Mississippi

DISTRIBUTED AND AVAILABLE ONLY IN THE 37 STATES EAST OF THE ROCKIES (except in the city of El Paso, Texas) THROUGH

AMERICAN HOSPITAL SUPPLY CORPORATION

GENERAL OFFICES • EVANSTON, ILLINOIS

For growth and appetite
in below-par children



TROPHITE*

B_{12} plus B_1

The only high potency combination of two growth-promoting, appetite-stimulating factors in two dosage forms.

In each teaspoonful (5 cc.), and in each tablet:

25 mcg. of B_{12} the "marshalling agent which effects reorganization of a variety of metabolic derangements involved" in simple growth failure.[1]

10 mg. of B_1 the factor whose value in combatting anorexia and deficient growth has long been known.[2]

Recommended dosage: Only one teaspoonful or one tablet daily.

1. Wetzel, N.C.; Hopwood, H.H.; Kuechle, M.E., and Grueninger, R.M.: J. Clin. Nutrition *1*:17 (Sept.-Oct.) 1952.
2. Best, C.H., and Taylor, N.B.: The Physiological Basis of Medical Practice, Baltimore, Williams & Wilkins, 1950, p. 741.

Smith, Kline & French Laboratories, Philadelphia

*T.M. Reg. U.S. Pat. Off.

for the obese patient . . .

℞

Obedrin

Semoxydrine HCl	5 mg.
(Methamphetamine HCl)	
Pentobarbital	20 mg.
Ascorbic Acid	100 mg.
Thiamine HCl	0.5 mg.
Riboflavin	1 mg.
Niacin	5 mg.

massengill

genuine Obedrin
obtainable
only on
prescription
• •
tablets are
monogramed
for your
assurance of
quality

FIVE POINTS to be weighed

when prescribing for urinary tract infections*

"The physician must weigh the following"*

*Carroll, G.: Texas State J. Med. 49:761 (Oct.) 1953

MANDELAMINE

MEETS ALL FIVE REQUIREMENTS

1. Ease of administration	No restrictions in diet, no forcing of fluids, no alkalinizing is necessary.
2. Toxic symptoms and side reactions	Serious toxic effects have never been reported. Side effects extremely rare. Only contraindication is renal insufficiency.
3. Development of resistance	Bacteria do not develop resistance, even after prolonged administration.[1,2,3]
4. Cost	Inexpensive, particularly important in long-continued therapy.
5. Effectiveness	Controls most common urinary infections in 3 to 14 days.[4,5,6] Bacteriostatic and bactericidal action is approximately the same order as sulfonamides and streptomycin.[7]

Adult dosage: 3 to 4 tablets t.i.d. Children: in proportion.

MANDELAMINE

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

NEPERA

Chemical Co., Inc.

NEPERA

Pharmaceutical Manufacturers, Nepera Park, Yonkers 2, N. Y.

1. Scudi, J. V., and Duca, C. J.: J. Urology 61:459, 1949. 2. Schloss, W. A.: Connecticut M. J. 14:994, 1950. 3. Knight, V., and others: Antibiotics & Chemotherapy 2:615, 1952. 4. Beckman, H., and Tatum, A.L.: Wisconsin M. J. 51:185, 1952. 5. Carroll, G., and Allen, H. N.; J. Urology 55:674, 1946. 6. Kirwin, T J., and Bridges, J. P.: Am. J. Surgery 52:477, 1941. 7. New and Nonofficial Remedies, A.M. A., 1953, p. 88.

"Mandelamine" is a trademark Reg. U. S. Pat. Off. of Nepera Chemical Co., Inc., for its brand of methenamine mandelate.

PHOTOGRAPH BY VICTOR KEPPLER

The gouty arthritic plays again...

BENEMID®

PROBENECID

When you treat your gouty arthritic patient with BENEMID, "lessening of joint disability and swelling"[1] follows the reduction (or even disappearance) of old tophi. In less advanced cases, crippling gouty arthritis has been prevented and "further enlargement of tophi . . . already formed" has been retarded.[1]

Patients on BENEMID therapy have returned to useful work,[1] even skilled use of the hands.[2]

BENEMID accelerates the excretion of uric acid.[3] "No instances of refractoriness (have been) reported."[3] Toxic reactions are rare.

Quick information: BENEMID is available in 0.5 *Gm.* tablets. *Dosage:* 1 to 4 tablets daily. *Contraindication:* renal impairment.

References: 1. Indust. Med. 22:311, 1953. **2.** J.A.M.A. 149:1188, 1952; **3.** Bull. Vancouver M.A. 29:306, 1953.

RHINALGAN®

NASAL DECONGESTANT

Uniformly *Safe!* FOR INFANTS • CHILDREN ADULTS AND AGED

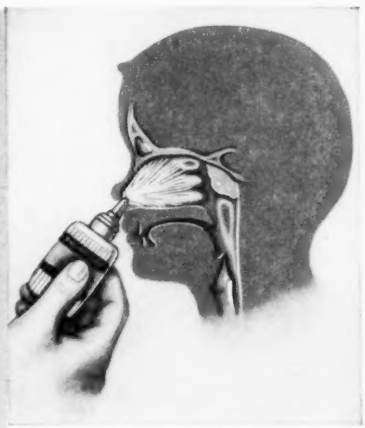
DOES **NOT** CONTAIN ANY ANTIBIOTIC

Does not affect
BLOODPRESSURE
RESPIRATION
CENTRAL NERVOUS SYSTEM

ENTIRELY Safe! in
CARDIAC—DIABETIC
PREGNANCY—THYROID
AND HYPERTENSION CASES

Authoritative Proof sent on request.

COMPLETELY FREE OF SIDE-EFFECTS... no cumulative action...no overdosage problem...non-toxic.



For *Safety!* USE RHINALGAN

NOW Modified Formula assures *PLEASANT, PALATABLE TASTE!*

FORMULA: Desoxyephedrine Saccharinate 0.50% w/v in an isotonic aqueous solution with 0.02% Laurylammonium saccharin. Flavored. pH 6.4.

Available on YOUR prescription only!

Reference to RHINALGAN:

1. Van Alyea, O. E., and Donnelly, W. A.: E.E.N.&T. Monthly, 31, Nov. 1952.
2. Fox, S. L.: AMA Arch. Otolaryn., 53, 607-609, 1951.
3. Molomut, N., and Harber, A.: N.Y. Phys., 34, 14-18, 1950.
4. Lett, J. E., (Lt. Col. MC-USAF) Research Report, Dept. Otolaryn., USAF School Aviat. Med., 1952.
5. Hamilton, W. F., and Turnbull, F. M.: J. Amer. Pharm. Ass'n., 7, 378-382, 1950.
6. Browd, Victor L.: Rehabilitation of Hearing, 1950.
7. Kugelmass, I. Newton: Handbook of the Common Acute Infectious Diseases, 1949.

NEW 6 TOS-NO-SAN—A specific in Suppurative Ear Infections (Acute or Chronic).

ASPIRALGAN—After 40 years still the analgesic and decongestant.

RECTALGAN-Liquid—For symptomatic relief in: Hemorrhoids, Pruritus, Perineal Suturing

DOHO CHEMICAL CORP., 100 Varick Street, New York 13, N. Y.

NOW—for that patient with CHRONIC FATIGUE

When the stress of life situations induces chronic fatigue, characterized by relative hypoglycemia and visceral spasm, Donnatal Plus (Tablets or new, palatable Elixir) provides the necessary anticholinergic blocking action, the mild sedation, and the high level of B-complex vitamin intake, that are necessary for successful management.

A. H. ROBINS CO., INC.
RICHMOND 20, VIRGINIA
Ethical Pharmaceuticals of Merit since 1878

DONNATAL PLUS

(Donnatal with B Complex) TABLETS • ELIXIR

Robins

Each 5 cc. teaspoonful of Elixir, or each Tablet, contains:

Hyoscyamine sulfate	0.1037 mg.	Thiamine	3.0 mg.
Atropine sulfate	0.0194 mg.	Riboflavin	2.0 mg.
Hyoscine hydrobromide	0.0065 mg.	Nicotinamide	10.0 mg.
Phenobarbital (1/4 gr.)	16.2 mg.	Pantothenic acid	2.0 mg.
		Pyridoxine hydrochloride	0.5 mg.

TEN MILLION HYPERTENSIVES

EVERY ONE AN INDIVIDUAL PROBLEM

HYPERTENSIVE DISEASE, widespread as it is today, cannot be defined as a discrete entity which responds universally to the administration of a single drug. It is a complex and dynamic disease process for which—in its several stages[1, 2, 3, 4]—no one drug will suffice or prove optimally effective.

Intensive Riker research has provided an armamentarium of drugs and drug combinations, embodying flexibility to fit the individual patient's needs and responses, and at the same time offering a completely new simplicity in dosage and administration. These are the outstanding features of the Riker approach to hypertensive therapy:

FOR THE PATIENT—Effective, safe drug therapy permits a fuller, happier life, less hampered by restrictions, and free from the need for heavy sedation.

Fewer dosage adjustments, with simpler, easier-to-follow dosage instructions.

Better prognosis regarding the deleterious influence of increasing pressure on the progression of the disease.

Greater freedom from hypertensive symptoms while under adequate therapy.

Apprehension allayed by tranquilizing effect of Rauwiloid.

Much lessened incidence of undesirable side effects.

Greater stability of lowered blood pressure makes chronic care safer and minimizes the possibility of escape from therapeutic levels.

FOR THE PHYSICIAN—For the first time, a complete spectrum of drug therapy for *all* hypertensives—in any stage of the disease—and with flexibility sufficient to adjust to individual response variations.

Ease of dosage adjustment makes patient supervision less cumbersome and more secure.

Proved clinical effectiveness with pharmacologically stable preparations.

Patient-acceptance of tablet therapy without complicated time schedules.

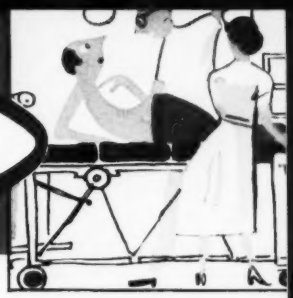
REFERENCES

1. Palmer, R.S.; Loofbourow, D., and Doering, C.R.: New England J. Med. *239*:990 (Dec.) 1948.
2. Keith, N.M.; Wagener, H.P. and Barker, N.W.: Am. J. M. Sc. *197*:332 (Mar.) 1939.
3. Smithwick, R.H.: Hypertension, A Symposium, edited by E.T. Bell, Minneapolis, University of Minnesota Press, 1951, pp. 429-448.
4. Pickell, P.W.: J. Louisiana M. Soc. *105*:293 (Oct.) 1953.
5. Vakil, R.J.: Brit. Heart J. *11*:360 (Oct.) 1949.
6. Wilkins, R.W.; Judson, W.E., and Stanton, J.R.: Proc. New England Cardiovas. Soc., 1951-1952, p. 34.
7. Ford, R.V.; Livesay, W.R.; Miller, S.I., and Moyer, J.H.: M. Rec. & Ann. *47*:608 (Aug.) 1953.
8. Wilkins, R.W., and Judson, W.E.: New England J. Med. *248*:48 (Jan. 8) 1953.
9. Ford, R.V., and Moyer, J.H.: Am. Heart J. *46*:754 (Nov.) 1953.
10. Ford, R.V., and Moyer, J.H.: GP *8*:81 (Nov.) 1953.

HERE IS

EFFECTIVE THERAPY

FOR EACH



IN GRADE I
RAUWILOID®

for Mild, Labile Hypertension

This selective alkaloidal extract (the alseroxylon fraction) of Rauwolfia serpentina provides effective treatment in the largest contingent of hypertensive patients—those with mild, labile hypertension.[5]

Rauwiloid produces:

- Dependable, gradual, temperate lowering of blood pressure.
- Subjective improvement and a sense of well-being occur within days, usually before full hypotensive effect is accomplished.
- A new type of gentle sedation—without somnolence.
- Virtually no side effects.
- No tolerance development.
- No danger of postural hypotension or excessive drop in blood pressure.
- No known contraindications.
- Dosage is not critical
- Simple dosage regimen: One dose of 2 tablets per day (2 mg. per tablet) taken on retiring usually suffices.

IN GRADES II and III
RAUWILOID + VERILOID
in a Single Tablet

for Moderate to Severe Hypertension

The combination of Rauwiloid with the faster-acting, more potent hypotensive—Veriloid®—provides effective therapy with least risk.

Apparent synergistic action of the combined drugs results in full hypotensive effects of Veriloid in well tolerated dosage.[6, 8]

- Dramatic, rapid symptomatic improvement when headache, dizziness and tachycardia are prominent.
- Side effects of Veriloid (nausea and vomiting) rarely encountered.
- Simpler plan of management with minimal dose adjustment and without loss of efficacy. Each tablet presents Rauwiloid 1 mg. and Veriloid 3 mg. Initial dose 1 tablet t.i.d., best after meals. Average maintenance dose, 1 tablet q.i.d.
- Addition of Rauwiloid increases percentage of patients in whom Veriloid proves effective.[7]

IN GRADES III and IV
RAUWILOID + HEXAMETHONIUM
in a Single Tablet

for Intractable, Rapidly Progressing Hypertension

When the patient's status warrants risking treatment by ganglionic blockade, addition of Rauwiloid's tranquilizing effect and gentle peristalsis stimulating action reduce erratic response inherent in hexamethonium therapy.[9, 10] Symptoms rapidly yield and tachycardia is relieved by mild bradycardic action of Rauwiloid.

Apparent synergistic action of Rauwiloid results in full hypotensive effect of hexamethonium from greatly reduced dosage (up to 50% less).[9]

Cautions and contraindications are only those applying to hexamethonium; but diligent patient supervision and careful instruction of the patient remain mandatory.

Each tablet contains Rauwiloid 1 mg. and hexamethonium 250 mg. Therapy should be initiated with ½ tablet q.i.d., not less than 4 hours apart, best before meals and at bedtime. After two weeks, when Rauwiloid effect has been established, dosage should be increased by 1 tablet per day, not oftener than twice weekly, until desired effect is obtained.

IN HYPERTENSIVE CRISES
Encephalopathy... Eclampsia

Solution Intravenous Veriloid* and Solution Intramuscular Veriloid* provide for immediate control of the critical blood pressure; they should be followed by carefully selected, adequate oral therapy based on prognosis.

*N.N.R.

Riker LABORATORIES, INC.

8480 BEVERLY BLVD. • LOS ANGELES 48, CALIF.

gentia·jel

ONLY gentian violet treatment you can prescribe

for

antibiotic moniliasis[1]

diabetic vulvitis[2]

vaginal thrush[3]

pregnancy moniliasis

93% clinically effective[4] in the most resistant cases during the last trimester of pregnancy

1. Editorial: J.A.M.A. 149:763 (June 21) 1952. 2. Bernstine, J.B. and Rakoff, A.D. "Vaginal Infections, Infestations, and Discharges," the Blakiston Co., Inc., 1953, p. 271. 3. Combined Textbook of Obstetrics and Gynecology, Edited by Dugald Baird, 5th Ed., E. & S. Livingstone Ltd., 1950. 4. Waters, E.G. and Wager, H.P., American Jour. of Obstetrics & Gynecology, 60:885, 1950.

AVAILABILITY: *gentia·jel* 12 single-dose plastic disposable applicators on prescription only.

SAMPLES ON REQUEST

Westwood Pharmaceuticals • 468 Dewitt Street, Buffalo 13, N. Y.

DIVISION OF FOSTER-MILBURN CO.

A real advantage *in treating Peptic Ulcer*

Alglyn®

Tablets

COUNCIL ACCEPTED

A recent clinical report continues to confirm that ALGLYN Tablets possess all of the theoretical attributes of an insoluble *non-systemic* antacid. Because of "the rapid disintegration and prolonged activity in gastric juice . . ."[1] dihydroxy aluminum aminoacetate (ALGLYN) is both a rapid *and* long-acting antacid, and is *truly* effective in *tablet* form.

Hammarlund and Rising,[2] comparing the buffering capacities of the most widely prescribed antacids in *vitro* found ALGLYN Tablets to be as good or better than antacid preparations in liquid or suspension form, and concluded that "dihydroxy aluminum aminoacetate (ALGLYN) gives both rapid and prolonged effect."[2]

Each pleasant tasting ALGLYN Tablet contains 0.5 Gm. dihydroxy aluminum aminoacetate, N.N.R. DOSAGE: 1 to 2 tablets, 1 to 2 hours after meals and at bedtime.

1. Current Med. Dig., 20:112, 1953 (reprint on request). 2. J. Am. Pharm. A., Sc. Ed., 38:586, 1949.

When spasm coexists . . .

The ulcer patient with coexisting spasm or intestinal hypermotility requires, in addition to antacid therapy, a spasmolytic and a sedative. The MALGLYN formula is designed to provide prompt control for these refractory patients.

DOSAGE: 1 to 2 tablets, 1 to 2 hours after meals and at bedtime.

FORMULA: *Each* MALGLYN *Tablet contains: Dihydroxy Aluminum Aminoacetate, N.N.R. 0.5 gm. (7.7 gr.); Belladonna Alkaloids (as sulfates), 0.162 mg. (1/400 gr.); Phenobarbital, 16.2 mg. (¼ gr.)*

Malglyn®

Compound

Dihydroxy Aluminum Aminoacetate, N.N.R. *Belladonna Alkaloids* *Phenobarbital* Alm-2

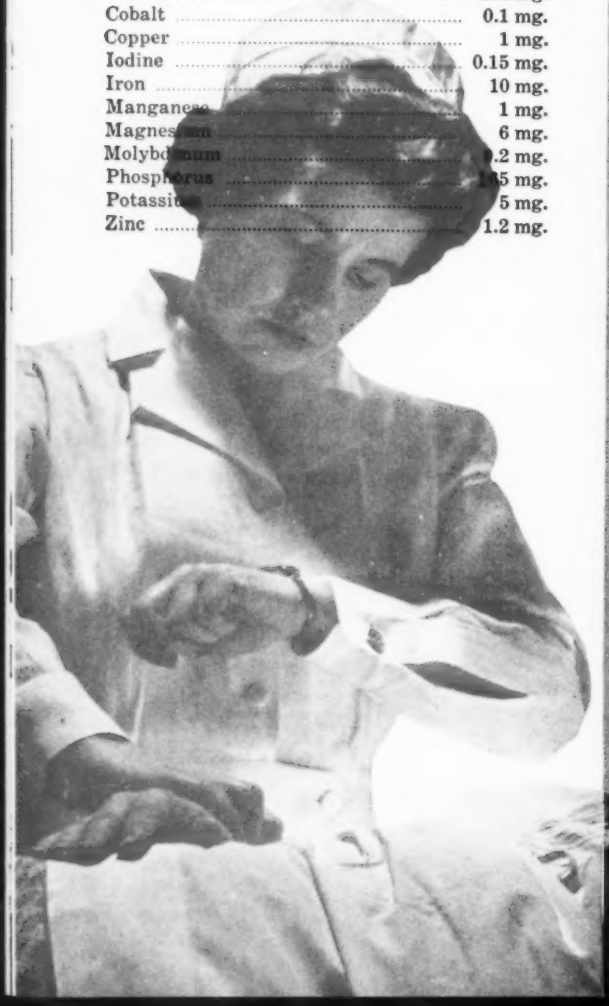
to support the healthy...

Viterra®

a vitamin-mineral formulation of 21 balanced factors, supplementing the depleted diet

each capsule of Viterra contains:

Vitamin A	5,000 U.S.P. Units
Vitamin D	500 U.S.P. Units
Vitamin B_{12}	1 mcg.
Thiamine Hydrochloride	3 mg.
Riboflavin	3 mg.
Pyridoxine Hydrochloride	0.5 mg.
Niacinamide	25 mg.
Ascorbic Acid	50 mg
Calcium Pantothenate	5 mg.
Mixed Tocopherols *(Type IV)*	5 mg.
Calcium	213 mg.
Cobalt	0.1 mg.
Copper	1 mg.
Iodine	0.15 mg.
Iron	10 mg.
Manganese	1 mg.
Magnesium	6 mg.
Molybdenum	.2 mg.
Phosphorus	5 mg.
Potassium	5 mg.
Zinc	1.2 mg.



to fortify the sick...

Viterra® Therapeutic

high-potency capsules specifically designed to meet increased nutritional needs during illness

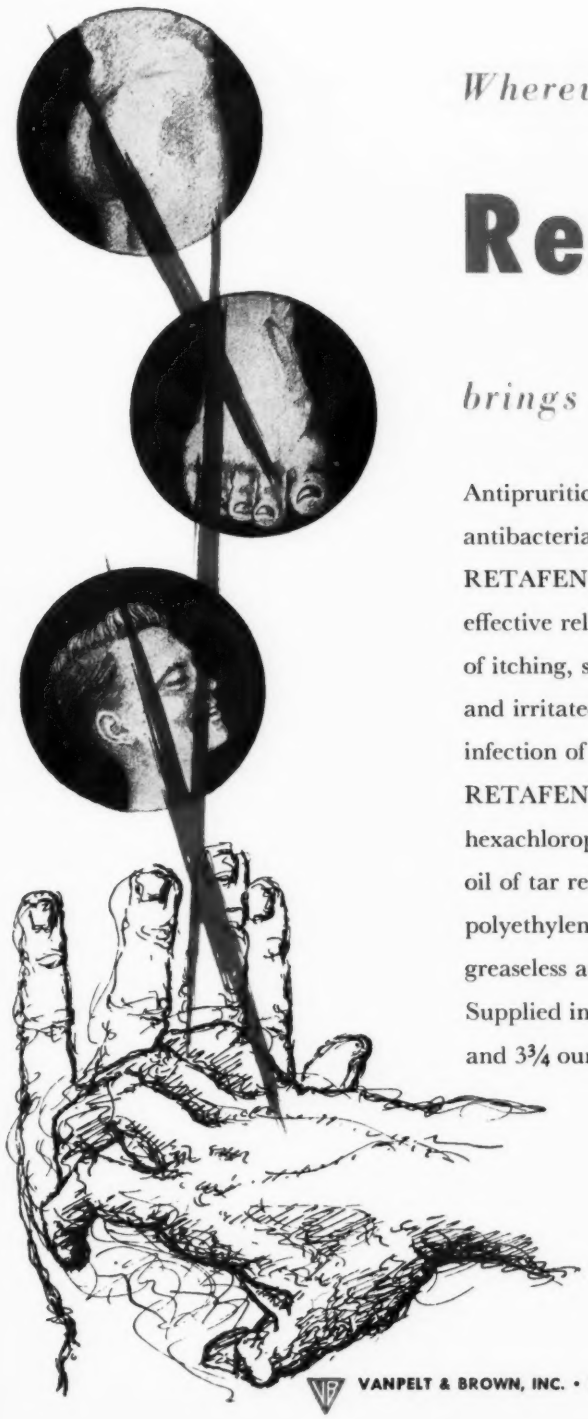
each capsule of Viterra Therapeutic contains:

Vitamin A	25,000 U.S.P. Units
Vitamin D	1,000 U.S.P. Units
Thiamine Mononitrate	10 mg.
Riboflavin	5 mg.
Vitamin B_{12}	5 mcg.
Niacinamide	100 mg.
Ascorbic Acid	150 mg.
Calcium	103 mg.
Cobalt	0.1 mg.
Copper	1 mg.
Iodine	0.15 mg.
Iron	10 mg.
Magnesium	6 mg.
Manganese	1 mg.
Molybdenum	0.2 mg.
Phosphorus	80 mg.
Potassium	5 mg.
Zinc	1.2 mg.

Roerig Rx

J. B. ROERIG AND COMPANY

Chicago 11, Illinois



Wherever it itches

Retafen®

brings relief . . .

Antipruritic,
antibacterial, antifungal—
RETAFEN acts promptly to provide effective relief from the nagging torment of itching, soothes and protects inflamed and irritated tissue, and guards against infection of open lesions.
RETAFEN Ointment combines hexachlorophene, phenol, resorcinol, oil of tar rectified and zinc oxide in a polyethylene glycol base—
greaseless and non-staining.
Supplied in 1 ounce tubes and 3¾ ounce jars.

VANPELT & BROWN, INC. • Pharmaceutical Chemists • RICHMOND, VIRGINIA

SHARP & DOHME
DIVISION OF MERCK & CO., Inc.
Philadelphia 1, Pennsylvania

PHOTOGRAPH BY CHARLES KERLEE

Gives "remarkable increase in strength, vigor"[1]...

REDISOL®

CRYSTALLINE VITAMIN B_{12}

In "pernicious anemia or tropical sprue in relapse," not even blood transfusions give "the remarkable increase in strength, vigor, and appetite..."[1] induced by large amounts of vitamin B_{12}.

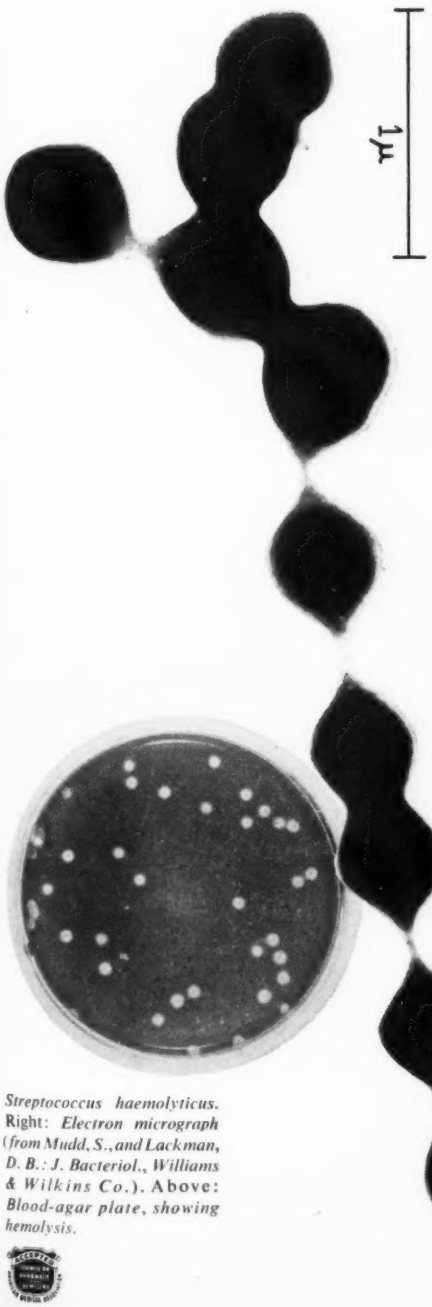
Vitamin B_{12}—REDISOL—has hemopoietic activity of liver[2]; improves neurologic symptoms—no evidence of toxicity;[2] makes the patient "happy to work again."[1] Effective orally, as well as parenterally.

REDISOL is valuable also in nutritional macrocytic anemia; relieves pain in trigeminal neuralgia.

Quick Information: Dosage forms for a variety of indications. *Tablets,* 25 and 50 *mcg.; Injectable,* 30, 100 and 1,000 *mcg.* per cc.; *Elixir,* 5 *mcg.* per 5 cc.

References: 1. J.A.M.A. 153:185, 1953. 2. N.N.R. 1953, p. 486.

SUSTAINED PENICILLIN LEVELS IN STREPTOCOCCAL INFECTIONS



Streptococcus haemolyticus. Right: *Electron micrograph (from Mudd, S., and Lackman, D. B.: J. Bacteriol., Williams & Wilkins Co.).* Above: *Blood-agar plate, showing hemolysis.*

". . . it has been shown that the treatment of streptococcic infections by adequate amounts of penicillin will prevent rheumatic fever . . . On the basis of our experience, we feel that BICILLIN for injection more nearly supplies the need than any other product available at present."[1]

"Following the injection of 600,000 units of this drug in aqueous suspension, 100 per cent of ambulatory adult males show blood concentrations of 0.105 to approximately 0.03 unit per ml. for 10 days, and about 50 per cent of these subjects maintain demonstrable concentrations for 14 days . . . The development of BICILLIN is one of the important milestones in antibiotic therapy."[2]

"The demonstration of detectable amounts of penicillin in the serum of most patients for four weeks following the administration of 1,250,000 units of BICILLIN suggests the feasibility of maintaining continuous drug prophylaxis against recurrences [of rheumatic fever] by administration of single monthly intramuscular injections."[3]

BICILLIN *is available in oral suspension, tablet, and injectable forms*

1. Breese, B. B.: J.A.M.A. *152*:10 (May 2) 1953
2. Welch, H.: Antibiot. & Chemo. *3*:347 (April) 1953
3. Stollerman, G. H., and Rusoff, J. H.: J.A.M.A. *150*:1571 (Dec. 20) 1952

BICILLIN®

Benzathine Penicillin G
Dibenzylethylenediamine Dipenicillin G

Wyeth®
Philadelphia 2, Pa.

aqueous

vi-syneral vitamin drops

for more assured aid toward

optimal nutrition
sturdier framework
greater vigor
better health
maximum growth

because of more rapid, more complete absorption and utilization of its aqueous natural vitamins A and D** when compared to oily solutions.

VI-SYNERAL VITAMIN DROPS
the original (since 1943)
and outstanding aqueous
multivitamin solution

each 0.6 cc. provides:

VITAMIN A (natural)	5000 Units
VITAMIN D (natural)*	1000 Units
ASCORBIC ACID (C)	50 mg.
THIAMINE HCl (B_1)	1 mg.
RIBOFLAVIN (B_2)	0.4 mg.
PYRIDOXINE HCl (B_6)	0.3 mg.
NIACINAMIDE	5 mg.
PANTOTHENIC ACID	2 mg.

*100% natural vitamin D, the superior anti-rachitic

easy to take, easy to give in formula, milk, desserts, etc.; no fishy taste or odor; economical.

Samples and detailed literature** on request

u. s. vitamin corporation
Casimir Funk Laboratories, Inc. affiliate
250 East 43rd Street • New York 17, N.Y.

in arthritis . . . clinically proved

DEPENDABLE therapy

to provide:

- Effective symptomatic relief[1,3]
- Anti-inflammatory action closely related to that of the steroid hormones[2]
- Absence of toxic side effects[3]
- Freedom from withdrawal symptoms[3]

PABALATE® Robins

PABALATE-SODIUM FREE

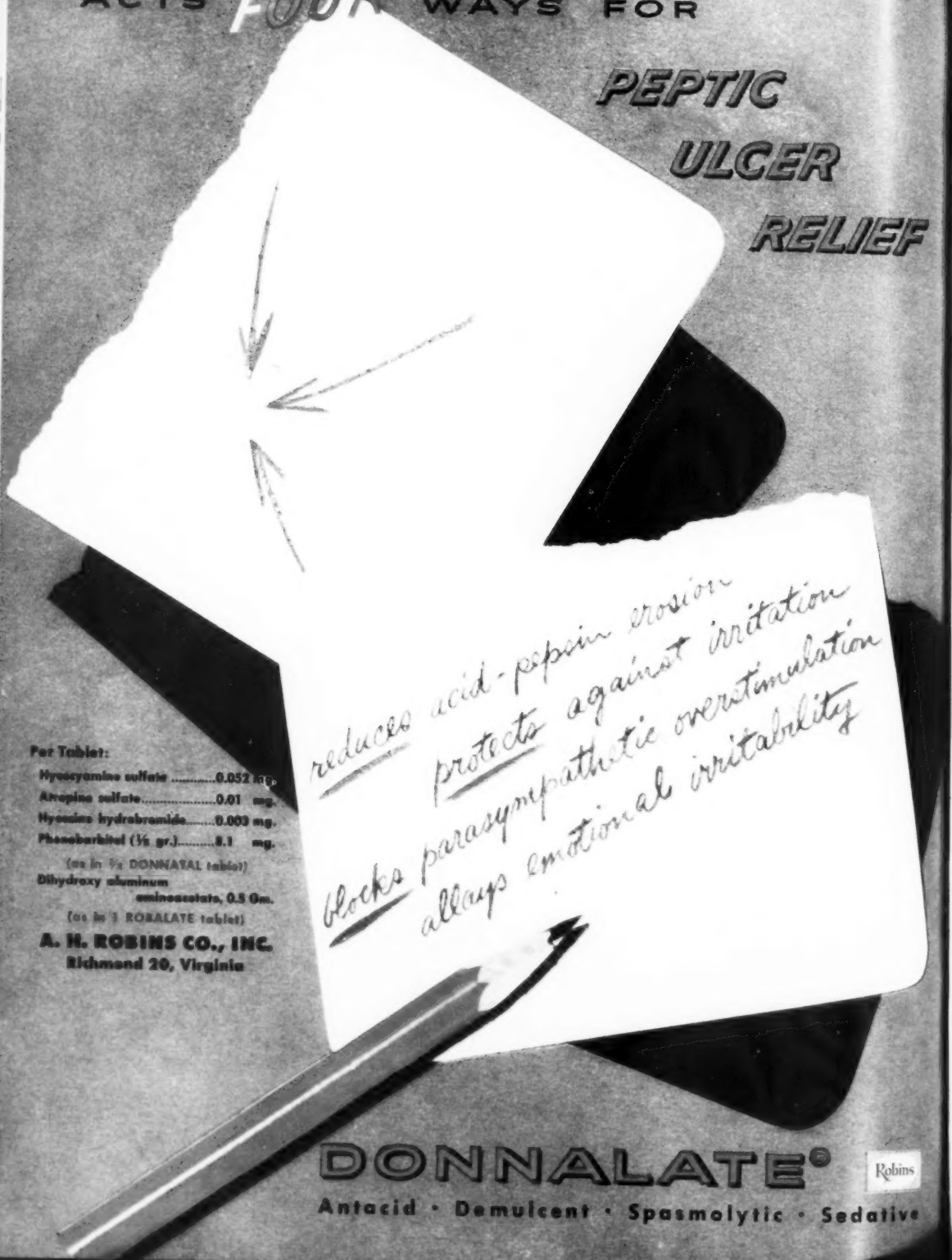
In each tablet: SALICYLATE 0.3 Gm. (5 gr.) • PARA-AMINOBENZOATE 0.3 Gm. (5 gr.) • ASCORBIC ACID 50 mg.

1. Proc. Staff Meet. Mayo Clin. 21:497, 504, 1946.
2. J. Clin. Endocrinol. Metab. 12:454, 1952.
3. Journal-Lancet 70:192, 1950.

A. H. ROBINS CO., INC. • RICHMOND 20, VIRGINIA

ACTS FOUR WAYS FOR

PEPTIC ULCER RELIEF



Per Tablet:

Hyoscyamine sulfate	0.052 mg.
Atropine sulfate	0.01 mg.
Hyoscine hydrobromide	0.003 mg.
Phenobarbital (1/6 gr.)	8.1 mg.

(as in ½ DONNATAL tablet)

Dihydroxy aluminum aminoacetate, 0.5 Gm.

(as in 1 ROBALATE tablet)

A. H. ROBINS CO., INC.
Richmond 20, Virginia

DONNALATE®

Robins

Antacid · Demulcent · Spasmolytic · Sedative

Diets look good on paper

but patients eat food!

It's easy to prescribe a diet . . . and it will be just as easy for patients to follow one, if Ac'cent is recommended with the diet.

Ac'cent brings out the *natural* flavors of foods, and patients will find that it makes the most bland food taste-stimulating and palatable. Even in foods that are held for a long period of time, Ac'cent retains the true delicious flavors.

Ac'cent is 99+% pure monosodium glutamate, in crystal form, obtained from natural food sources. It is not a synthetic chemical, and it is nontoxic. Ac'cent contains 12.3 per cent of sodium. Include Ac'cent in your special diets . . . "finicky eaters," too, will find it makes foods taste better . . . it is available at neighborhood food stores.

May we send you a brochure on **Ac'cent**

(99+% pure monosodium glutamate)

makes good food and good cooking taste better!

Learn about Ac'cent at first hand . . . visit our exhibit at the A.M.A. meeting.

Amino Products Division, International Minerals & Chemical Corp., Chicago 6, Ill.

AC'CENT, T.M. Reg. U. S. Pat. Off.

PROFOUND RELIEF AND
QUICK REHABILITATION

IN acute bursitis

Profound and rapid therapeutic success in bursitis, especially in the acute stage, is obtained with HP*ACTHAR *Gel*. Cases refractory to other types of therapy have responded to HP*ACTHAR *Gel*, regardless of the severity of the condition. Calcium deposits may disappear.

HP*ACTHAR *Gel*, a new repository ACTHAR with rapid response and sustained action, is as easily administered as insulin with a minimum of discomfort, whether injected intramuscularly or subcutaneously. It is economical too, far less time and money being spent to restore the patient's working ability.

HP*ACTHAR *Gel*
(IN GELATIN)

The small total dose required affords economy and virtual freedom from side actions.

THE ARMOUR LABORATORIES
A DIVISION OF ARMOUR AND COMPANY - CHICAGO 11, ILLINOIS

2 two-way control of hay fever

1. shorter and safer desensitization procedures with

CHLOR-*TRIMETON* Injection 100 mg./cc.

(in same syringe with allergenic extract)

2. relieve symptoms—all day (or all night*) relief with just one

CHLOR-*TRIMETON* REPETAB (8 mg.)

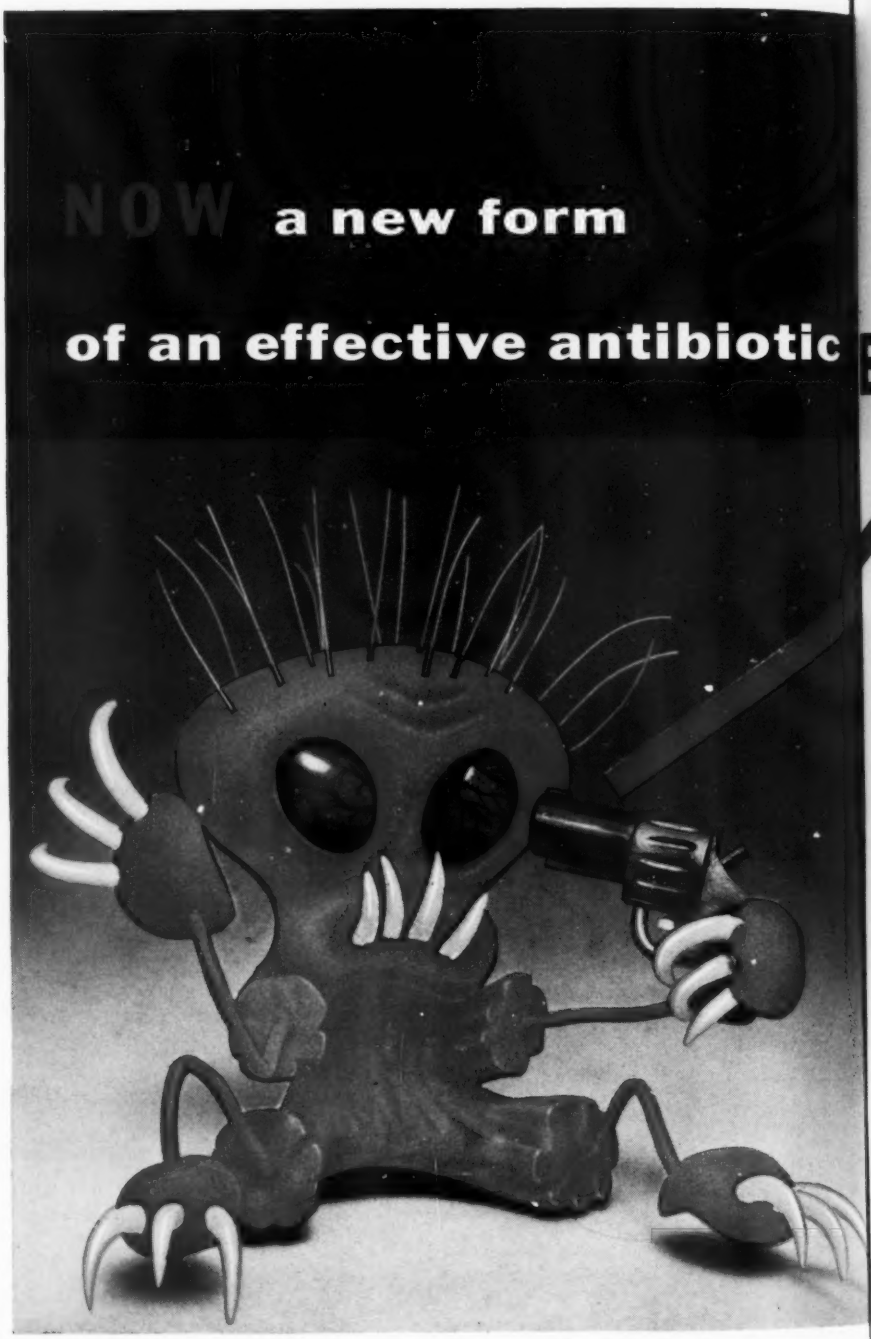
*If sleep is a problem, prescribe CHLOR-*TRIMETON* REPETABS with Sodium Pentobarbital (¾ gr.)

CHLOR-*TRIMETON*® Maleate, brand of chlorprophenpyridamine maleate.
REPETABS,® repeat action tablets.

Schering

CHLOR-*TRIMETON*

SCHERING


NOW a new form
of an effective antibiotic

Film Sealed

ERYTHROCIN Stearate

TRADE MARK

(Erythromycin stearate, Abbott)

NOW . . . FASTER DRUG ABSORPTION
New ERYTHROCIN Stearate tablets provide excellent drug protection from gastric secretions with the new *Film Seal** marketed only by Abbott—plus a special buffer system. Result: Because the need for an enteric coating is eliminated, the drug is more rapidly absorbed.

NOW . . . EARLIER BLOOD LEVELS
Because of the swift absorption, high blood concentrations of ERYTHROCIN are reached *within 2 hours.* (Enteric-coated erythromycin affords little or no blood level at 2 hours.) Peak level is reached at 4 hours, with significant concentrations for 8 hours.

LOW TOXICITY
ERYTHROCIN is *less likely to alter normal intestinal flora than most other widely-used antibiotics.* Gastrointestinal disturbances are rare, with no serious side effects reported.

EFFECTIVE AGAINST RESISTANT COCCI
ERYTHROCIN Stearate is highly effective against coccal infections. Especially recommended when the infecting organism is staphylococcus—*because of the high incidence of staphylococci resistant to penicillin and other antibiotics.* Advantageous, too, when patients are allergically sensitive to other antibiotics.

ERYTHROCIN Stearate (100 and 200 mg.) comes in bottles of 25 and 100 *Film Sealed* tablets. Abbott

*patent applied for

FOR CHILDREN:
Pediatric ERYTHROCIN Stearate Oral Suspension.
Tasty, stable, ready-mixed.

a favorite

prescription

the year 'round

to **accelerate**

healing

DESITIN® ointment

the pioneer external **cod liver oil** therapy

New impressive studies[1] again confirm the clinical value[2-4] of Desitin Ointment to protect, soothe, facilitate healthy granulation, and speed healing even in stubborn skin conditions often resistant to other therapy.

in **wounds • burns • ulcers** (decubitus, varicose, diabetic)

diaper rash • intertrigo

non-specific dermatoses • perianal dermatitis

Protective, soothing, healing, Desitin Ointment is a non-irritating, non-sensitizing blend of high grade Norwegian cod liver oil (with its unsaturated fatty acids and high potency vitamins A and D in proper ratio for maximum efficacy), zinc oxide, talcum, petrolatum, and lanolin. Desitin Ointment does not liquefy at body temperature and is not decomposed or washed away by secretions, exudate, urine or excrements. Dressings easily applied and painlessly removed. Tubes of 1 oz., 2 oz., 4 oz., and 1 lb. jars.

samples and reprint[1] on request

DESITIN CHEMICAL COMPANY
70 Ship Street, Providence 2, R. I.

1. Grayzel, H. G., Heimer, C. B., and Grayzel, R. W.: New York St. J. M. 53:2233, 1953.
2. Heimer, C. B., Grayzel, H. G., and Kramer, B.: Archives of Pediatrics 68:382, 1951.
3. Behrman, H. T., Combes, F. C., Bobroff, A., and Leviticus, R.: Ind. Med. & Surgery 18:512, 1949.
4. Turell, R.: New York St. J. M. 50:2282, 1950.

Made from the *leaf*—

Always
WAS, IS and
WILL BE
Dependable
in digitalization
and its maintenance

The physician
can always
rely on

Pil. Digitalis (Davies, Rose)
0.1 Gram (approx. 1½ grains)

These certain qualities can be positively identified

Comprise the entire properties of the leaf of Digitalis

Physiologically Standardized

Each Pill is equivalent to one U. S. P. Digitalis Unit

Clinical samples and literature sent to physicians on request

Davies, Rose & Company, Limited Boston 18, Mass.

PHARMACEUTICAL MANUFACTURERS D23

Two useful drugs for your mental cases

Clinical reports published in 1953 have confirmed the value of NICOTAL-G for *mental depression* and *anxiety*, and of NICOZOL for *senile psychoses*.

1 NICOTAL-G

is a combination of nicotinic acid (vasodilator) and phenobarbital (sedative). With the combination of these two drugs Thompson and Proctor[1] in 1953 reported definite improvement in a series of patients suffering from *depressive* and *anxiety reactions*.

NICOTAL-G Tablets (grooved) for mental depression and anxiety. Contain nicotinic acid 100 mg. and phenobarbital 8 mg. Dosage: 1/2 to 1 tablet (or a teaspoonful of the Elixir) t. i. d. according to dosage schedule.

2 NICOZOL

is a combination of pentylenetetrazol (analeptic) and nicotinic acid (vasodilator). With the combination of these two drugs Levy[2] in 1953 reported benefit in *senile psychoses* including *mild memory defects, confusion, mental deterioration* and *abnormal behavior*.

Each NICOZOL Capsule contains pentylenetetrazol 100 mg. and nicotinic acid 50 mg. One teaspoonful of the Elixir equivalent to 2 capsules. The recommended dose is 1 or 2 capsules or 1 teaspoonful of the Elixir three times daily.

1. THOMPSON, L. J. AND PROCTOR, R. C.:
North Carolina Medical Journal, Sept., 1953.

2. LEVY, S.:
Journal of the American Medical Association, Dec. 5, 1953.

EXCLUSIVE PRODUCTS OF

DRUG SPECIALTIES, Inc.
Winston-Salem, N. C.

Drug Specialties, Inc.
Winston-Salem 1, N. C.

Kindly send me complimentary sample and professional literature.

☐ NICOTAL-G Tablets
☐ NICOZOL Capsules

..... M.D.

Street .....

City ..... Zone .... State .....

When feet feel like ice—

...when patients complain of cold feet because peripheral circulation is impaired, Roniacol® 'Roche'--an effective, well-tolerated vasodilator--provides:

→ 1. prolonged vasodilation

→ 2. appealing form (elixir or tablets)

→ 3. relative freedom from side reactions

Speaking of vasodilators —

WHICH DO YOU PRESCRIBE?

No matter which one you have been using, we believe you'll agree that most of them are reasonably good.

Still, we hope you'll try Roniacol® 'Roche'... because it's so well tolerated ...because it usually has a prolonged effect ...because it's available in a delicious elixir and in tablets.

PHOTOGRAPH BY CHARLES KERLEE

Barefoot boys need

CRYSTOIDS®

ANTHELMINTIC

A single dose of CRYSTOIDS usually eradicates hookworms, as well as roundworms and other intestinal parasites. CRYSTOIDS kill worms outright...do not require prolonged dosage with possible toxic effects... assure rapid and uneventful elimination.

Quick Information: CRYSTOIDS are gelatin-coated pills containing 'Caprokol' hexylresorcinol. They are available in single-treatment packages in 2 strengths: *0.2 Gm.* and *0.1 Gm.* Administration and dosage are included with each package.

The 4-in-1 product for 24-hour therapy against gonorrhea, bacillary dysentery

each tablet contains

AUREOMYCIN Chlortetracycline*	*125 mg.*	*SULFAMERAZINE*	*167 mg.*
SULFADIAZINE	*167 mg.*	*SULFAMETHAZINE*	*167 mg.*

Aureomycin Triple Sulfas

TABLETS LEDERLE

*Trade Mark

LEDERLE LABORATORIES DIVISION
AMERICAN Cyanamid COMPANY PEARL RIVER, NEW YORK

Lederle

this child *could* gain 10 pounds

with **EDIOL** palatable oral fat emulsion

caloric boost

<u>without</u> gastric burden

An unusually palatable dietary additive, EDIOL can be taken alone and also combined with a variety of foods. Just two tablespoonfuls q.i.d. of this delicious oral fat suspension provide 600 extra calories. For still higher caloric intake, more may be prescribed as required.

EDIOL micronized emulsion of coconut oil (50%) and sucrose (12½%), supplied in bottles of 16 fluid ounces.

Schenley Laboratories, Inc.

New York 1, New York

Calm, Relaxed and Alert
MEBARAL®
BRAND OF MEPHOBARBITAL
WINTHROP
for the hyperexcitability so often found in
hypertension
hyperthyroidism
convulsive disorders
difficult menopause
psychoneurosis
hyperhidrosis
Mebaral's soothing sedative effect is obtained without significantly clouding the patient's mental faculties.
Average Dose:
Adults—32 mg. to 0.1 Gm. (optimal 50 mg.), 3 or 4 times daily.
Children—16 to 32 mg., 3 or 4 times daily.
Tasteless tablets of 32 mg. (½ grain)
50 mg. (¾ grain)
0.1 Gm. (1½ grains)
0.2 Gm. (3 grains) scored.
WINTHROP-STEARNS INC. New York 18, N. Y. • Windsor, Ont.
Mebaral, trademark reg. U. S. Pat. Off.

for a response

Fully evaluated clinically

...and known as an agent of choice in the treatment of infections caused by gram-positive and gram-negative pathogens, spirochetes, rickettsiae, certain large viruses and protozoa.

True broad-spectrum action

"Terramycin appears to have [a] most widespread effective range...."[1]

Rapidly absorbed

"Terramycin administered orally was absorbed rapidly with the appearance of antibacterial activity in the serum within 1 hour of administration."[2]

Promptly effective

Many "patients...improved rapidly"[3] with return of temperature to normal often noted within twenty-four hours.

Well tolerated

"Terramycin is generally well tolerated...."[4]

®

Brand of oxytetracycline

1. Cowart, E. C., Jr.: Mississippi Doctor 29:278 (April) 1952.
2. Sayers, R. J., et al.: Am. J. M. Sc. 221:256 (March) 1951.
3. Knight, V.: New York State J. Med. 50:2173 (Sept. 15) 1950.
4. Trafton, H. M., and Lind, H. E.: J. Urol. 69:315 (Feb.) 1953.

Pfizer

PFIZER LABORATORIES, Brooklyn 6, N. Y.
Division, Chas. Pfizer & Co., Inc.

Out in front...

in treatment

of

hypertension

Raudixin

SQUIBB RAUWOLFIA

More physicians write prescriptions for Raudixin than for all other forms of rauwolfia combined. The reasons for this choice are sound:

- Raudixin contains the standardized *whole root* of Rauwolfia serpentina. There is no definite evidence that any alkaloid or fraction has all the beneficial actions of the whole crude root.
- Raudixin lowers blood pressure moderately, gradually, stably. It also slows the pulse and has a mild sedative effect.
- Raudixin is the *safe* hypotensive agent. It causes no dangerous reactions and almost no unpleasant ones.
- Raudixin is often effective alone in mild to moderate hypertension of the labile type. In more severe cases it is effectively combined with other hypotensive agents.

50 and 100 mg. tablets, bottles of 100

SQUIBB

"RAUDIXIN" IS A TRADEMARK

In Neuritis—

is temporary relief enough?

Now—

THE LONG PERIOD OF DISTURBING SYMPTOMS CAN BE REDUCED BY THE PROMPT USE OF—

PROTAMIDE

When you have a case of neuritis (intercostal, facial or sciatic) where the inflammation of nerve roots is not caused by mechanical pressure, let Protamide demonstrate how much faster lasting relief can be obtained than with usual therapy.
Usual dose: one ampul every day for five days or longer.

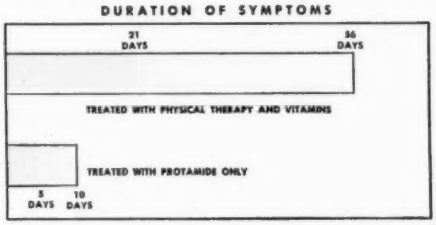
NEURITIS

(Sciatic • Intercostal • Facial)

A COMPARISON BETWEEN COMPARABLE GROUPS WITH AND WITHOUT PROTAMIDE THERAPY

CONTROL—156 Patients
The Course of the Disease
Was 21 Days to 56 Days

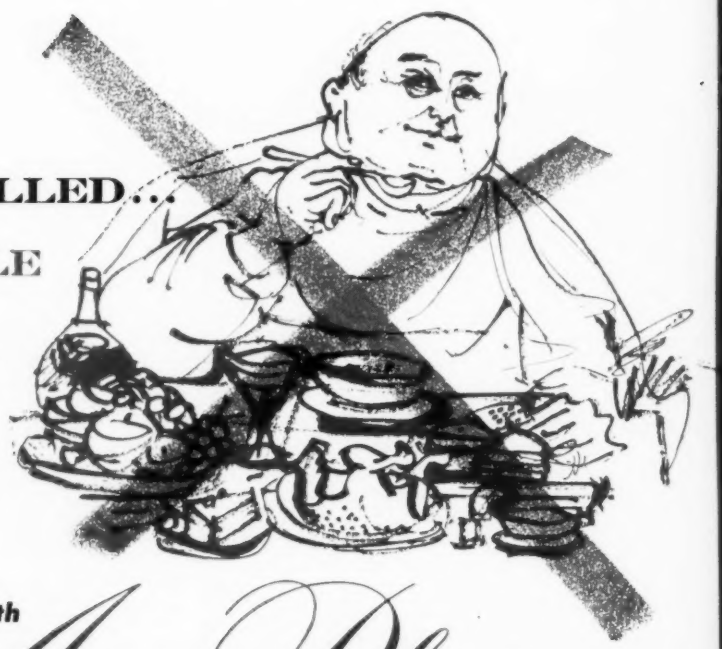
PROTAMIDE—84 Patients
Complete Relief was
Obtained in 5 to 10 Days



SHERMAN LABORATORIES
BIOLOGICALS • PHARMACEUTICALS
WINDSOR DETROIT 15, MICH. LOS ANGELES

"TREATMENT OF NEURITIS WITH PROTAMIDE"
Richard T. Smith, M.D.
Associate in Medicine and Chief of Arthritis at Jefferson Medical College and Hospital; Associate Physician and Chief of Arthritis, Pennsylvania Hospital; Director of Department of Rheumatology, Benjamin Franklin Clinic.

REPRINTS AVAILABLE



CONTROLLED...

SENSIBLE

DIETING

with

Am Plus®

curb appetite To reduce voluntary food intake, every AM PLUS capsule provides 5 mg. of dextro-amphetamine sulfate

while maintaining

sound nutrition The balanced AM PLUS formula assures adequate vitamin-mineral supply, essential in any weight control program

each capsule of *Am Plus* **contains:**

DEXTRO-AMPHETAMINE SULFATE	5 mg.	Cobalt	0.1 mg.
Vitamin A	5,000 U.S.P. Units	Copper	1 mg.
Vitamin D	400 U.S.P. Units	Iodine	0.15 mg.
Thiamine Hydrochloride	2 mg.	Iron	3.33 mg.
Riboflavin	2 mg.	Manganese	0.33 mg.
Pyridoxine Hydrochloride	0.5 mg.	Molybdenum	0.2 mg.
Niacinamide	20 mg.	Magnesium	2 mg.
Ascorbic Acid	37.5 mg.	Phosphorus	187 mg.
Calcium Pantothenate	3 mg.	Potassium	1.7 mg.
Calcium	242 mg.	Zinc	0.4 mg.

J. B. ROERIG AND COMPANY, *Chicago 11, Illinois*

ACHROMYCIN

Hydrochloride Tetracycline HCl *Lederle*

ACHROMYCIN

a new, superior, broa
with fewer side
increased tissue diff

ACHRO

Developed by Lederle research, ACHROMYCIN is a new broad-spectrum antibiotic which has already demonstrated notable effectiveness in clinical trials.

Several investigators have reported definitely fewer side reactions with ACHROMYCIN than those experienced with certain other broad-spectrum antibiotics.

In addition, ACHROMYCIN has shown quicker diffusion in tissues and body fluids. It also has greater stability, which prolongs high blood levels.

Lederle LEDERLE LABORATORIES DIVISION *AMERICAN*

broad-spectrum antibiotic
side effects, wide antimicrobial range,
diffusion

OMYCIN*

Hydrochloride Tetracycline HCl *Lederle*

ROMYCIN
which has
veness in

ted defi-
ROMYCIN
in other

n quicker
s. It also
ngs high

CLINICAL INDICATIONS

ACHROMYCIN exhibits a broad range of activity against beta hemolytic streptococcic infections, *E. coli* infections (including urinary tract infections, peritonitis, abscesses), meningococcic, staphylococcic, pneumococcic and gonococcic infections, otitis media and mastoiditis, acute bronchitis and bronchiolitis, and certain mixed infections.

DOSAGE FORMS

CAPSULES—250 mg., 100 mg., and 50 mg.

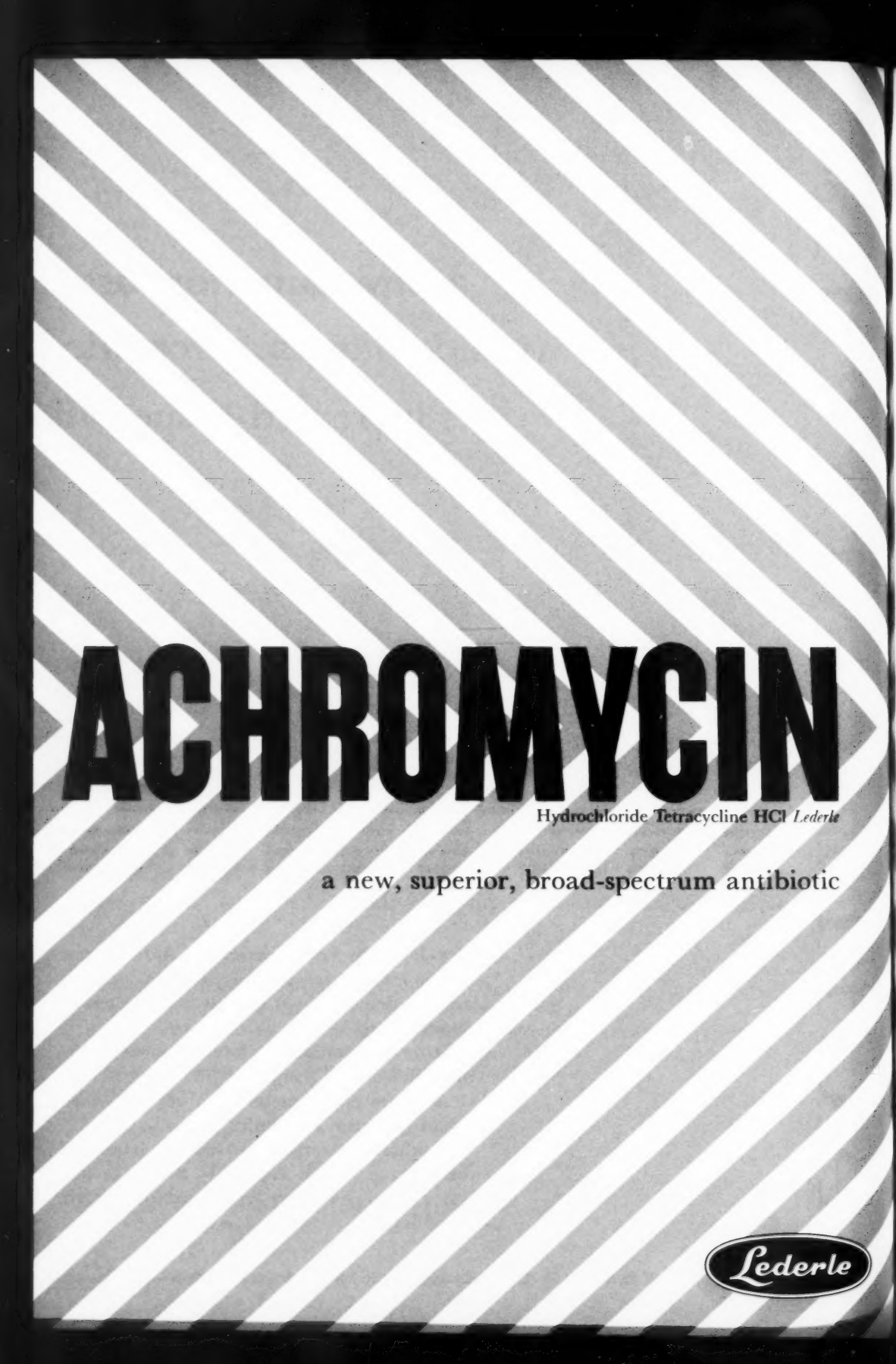
SPERSOIDS* Dispersible Powder—50 mg. per teaspoonful (3.0 Gm.)

INTRAVENOUS—500 mg., 250 mg., and 100 mg.

Other dosage forms will soon be available.

*Reg. U.S. Pat. Off.

AMERICAN Cyanamid COMPANY PEARL RIVER, NEW YORK


ACHROMYCIN
Hydrochloride Tetracycline HCl Lederle
a new, superior, broad-spectrum antibiotic
Lederle

WARREN-TEED
Pharmaceuticals

Glu-Sal

WARREN-TEED

Relief and Repair in

RHEUMATIC CONDITIONS

Arthritis • Sciatica • Neuritis • Neuralgia • Gout

Glucuronolactone replacement therapy . . . counteracts the degenerative influences of elevated serum hyaluronidase in rheumatic patients.

Salrin . . . sodium-free salicylamide . . . does not metabolize to free salicylic acid . . . analgesic.

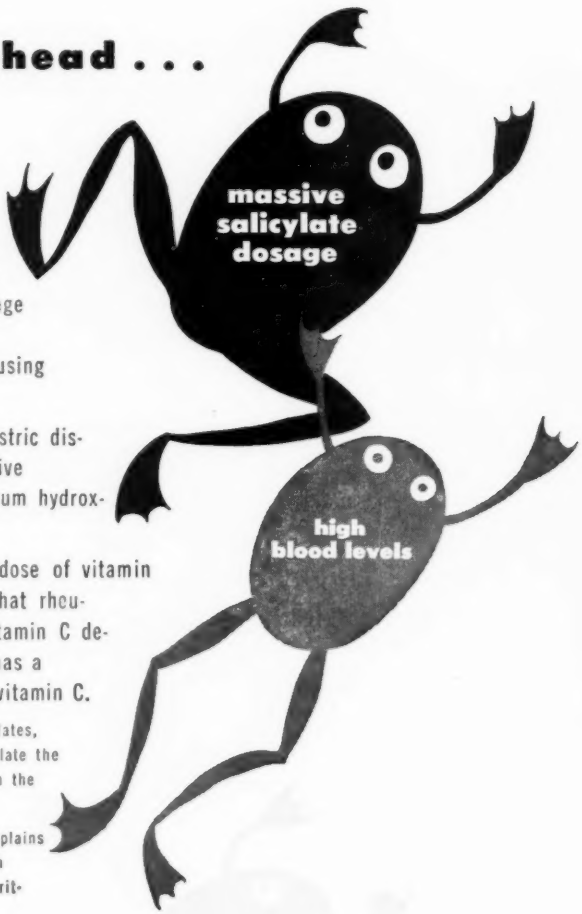
Non-Toxic . . . no known contraindications . . . well tolerated.

GLU-SAL Warren-Teed — bottles of 100 and 500 tablets

THE WARREN-TEED PRODUCTS COMPANY,
COLUMBUS 8, OHIO

IN ARTHRITIS

three jumps ahead . . .



To obtain maximum results, high salicylate blood levels are required. This means high oral dosage which can be attained, without excessive gastric disturbance, by using Salcedrox.

Salcedrox virtually eliminates gastric disturbance, because of the protective combination with activated aluminum hydroxide and calcium carbonate.

Salcedrox also contains a high dose of vitamin C, because it has been observed that rheumatic and arthritic states show vitamin C deficiencies, and salicylate therapy has a tendency to intensify depletion of vitamin C.

There is significant evidence that salicylates, through action on the hypothalamus, stimulate the pituitary, producing an ACTH- like effect on the adrenal cortex. *

This new concept of salicylate action explains many of the clinical results obtained with salicylate therapy in the treatment of arthritides and rheumatic afflictions—observed results that cannot be attributed to analgesic action alone.

*Proceedings Soc. Exp. Bio. Med., 1952, v80, 51-55. G. Cronheim, et al.

FORMULA

Sodium Salicylate .5 gr. (0.3 Gm.)
Aluminum Hydroxide Gel. dried ..... 2 gr. (0.12 Gm.)
Calcium Ascorbate ...1 gr. (60 mg.) (equivalent to 50 mg. Ascorbic Acid)
Calcium Carbonate ...1 gr. (60 mg.)

massengill
BRISTOL, TENN.

send for professional literature

SALCEDROX

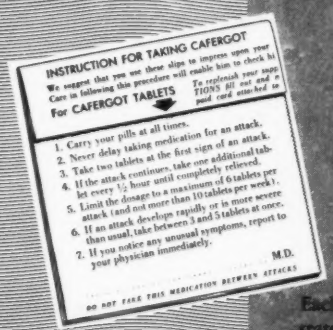
VASCULAR HEADACHES
Reminder #2

WHEN...
the headache
▲ *is of vascular mechanism*
▲ *has no underlying pathology*

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY

CAFERGOT
TABLETS

Effective in 85 to 90% of the recurrent, throbbing headaches, e.g. migraine.


INSTRUCTION FOR TAKING CAFERGOT
We suggest that you use these slips to impress upon your Care in following this procedure will enable him to check hi
For CAFERGOT TABLETS
To replenish your supp TIONS fill out and r post card attached to
1. Carry your pills at all times.
2. Never delay taking medication for an attack.
3. Take two tablets at the first sign of an attack.
4. If the attack continues, take one additional tablet every ½ hour until completely relieved.
5. Limit the dosage to a maximum of 6 tablets per attack (and not more than 10 tablets per week).
6. If an attack develops rapidly or is more severe than usual, take between 3 and 5 tablets at once.
7. If you notice any unusual symptoms, report to your physician immediately.
M.D.
DO NOT TAKE THIS MEDICATION BETWEEN ATTACKS

To be sure of relief . . . *be sure* that your patient is following your directions* *exactly:*

1. Carry your pills at all times.
2. Never delay taking medication for an attack.
3. Take two tablets at the first sign of an attack.
4. If the attack continues, take one additional tablet every ½ hour until completely relieved.
5. Limit dosage to a maximum of 6 tabs. per attack.
6. If an attack develops rapidly or is more severe than usual, take between 3 and 5 tablets at once.
7. If you notice any unusual symptoms, report to your physician immediately.

Each Cafergot® Tablet contains 1 mg. of ergotamine tartrate and 100 mg. caffeine alkaloid.

Supplied: Bottles of 20 and 100 tablets.

*Pads of Direction Slips (as above) are yours for the asking; write to: Sandoz Pharmaceuticals, Hanover, N. J.

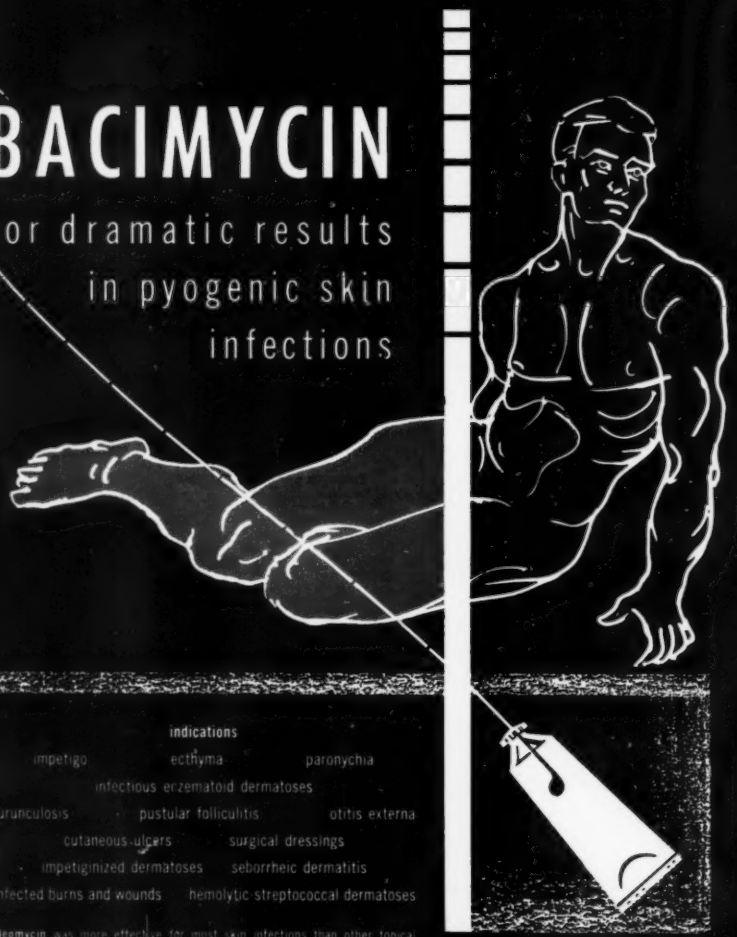
CAFERGOT VASCULAR HEADACHES

Sandoz PHARMACEUTICALS
DIVISION OF SANDOZ CHEMICAL WORKS, INC.
HANOVER, N.J. • CHICAGO 2 • SAN FRANCISCO 8

BACITRACIN NEOMYCIN OINTMENT

BACIMYCIN

for dramatic results in pyogenic skin infections



indications

impetigo ecthyma paronychia
infectious erzematoid dermatoses
furunculosis pustular folliculitis otitis externa
cutaneous ulcers surgical dressings
impetiginized dermatoses seborrheic dermatitis
infected burns and wounds hemolytic streptococcal dermatoses

Neomycin was more effective for most skin infections than other topical agents used in a series of 675 cases.*

Bacitracin has been widely favored for local treatment of skin infections.*

The **combination** of both antibiotics extends the broad spectrum activity of each.*

Supplied: ½ oz. tubes

Walker
LABORATORIES, INC
MT VERNON, N. Y.

DEPENDABLE . . . UNIFORMLY SHARP . . . ENDURING CUTTING EDGES

ANY WAY YOU LOOK AT IT

. . . Performance-Proved

Any way you look at it . . . performance-proved B-P RIB-BACK SURGICAL BLADES contribute to the certainty of the surgeon's touch, as they provide him with dependable, uniformly sharp and enduring cutting edges.

B-P RIB-BACK SURGICAL BLADES are the result of meticulous care and fine craftsmanship in every detail of production.

The ECONOMY in the purchase of B-P RIB-BACK SURGICAL BLADES is proved by their performance!

Ask your dealer

BARD-PARKER COMPANY, INC.
Danbury • Connecticut

It's Sharp

And Rib-Backs packaged in the new RACK-PACK provide further *economies* in time and labor for the O. R. Personnel. Blades from RACK-PACK to sterilizer in *a matter of seconds.*

S-79

to supplement treatment with encouragement...

℞ **HASAMAL®**

a carefully formulated analgesic . . . sedative . . . antispasmodic—for effective relief of the pain and anxiety which frequently interfere with smooth recovery

Each **HASAMAL** *tablet contains:*

Phenobarbital (WARNING: May be habit-forming)	16.2 mg. (¼ gr.)
Acetylsalicylic Acid (Aspirin)	162.5 mg. (2½ gr.)
Acetophenetidin	162.5 mg. (2½ gr.)
Atropine Sulfate	0.00065 mg.
Hyoscine Hydrobromide	0.0011 mg.
Hyoscyamine Hydrobromide	0.0325 mg.

when *severe pain* demands more potent measures...

℞ **HASACODE®**

providing the actions of HASAMAL *plus codeine.* Available in two codeine strengths — ¼ gr. (HASACODE) and ½ gr. (HASACODE "STRONG").

SUPPLIED: HASAMAL — bottles of 100, 500, and 1000 tablets; HASACODE and HASACODE "STRONG" — bottles of 100 and 500 tablets.

CCH

CHARLES C. HASKELL & CO., INC.

RICHMOND • VIRGINIA

Polyunguia, second toe, left foot.

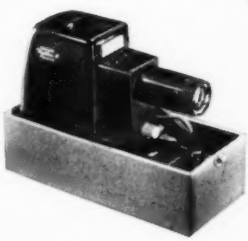
Carcinoma, floor of mouth.

Carcinoma, sigmoid colon.

Deformed upper eyelid.

Photographs: DAVID LUBIN, Medical Illustration Service, U.S.V.A. Hospital, Cleveland 30, Ohio.

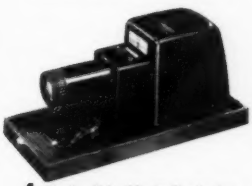
Four ways to get the most out of every 2x2-inch slide...



1. Kodaslide Highlux III Projector: Slides cooled by blower fan. Kodak Projection Ektanon Lens, 5-inch f/3.5 Lumenized, assures extra-sharpness with flat, edge-to-edge screen definition. For audiences of medium size. **Price,** $56.50.

2. Kodaslide Highlux II Projector: (Same as Highlux III but with 200-watt lamp, and without fan.) **Price,** $36.50.

3. Kodaslide Projector, Master Model: Professional type, with 1000-watt lamp. Delivers more light than any other 2x2-inch slide projector. King of them all. From $169. Case, $50.



4. Kodaslide Merit Projector: Has 3-element Lumenized Kodak Projection Ektanon Lens, 5-inch f/3.5 . . . 150-watt lamp . . . improved slide feeding . . . easy-action elevation. **Budget-priced,** $24.65.

How good projection can electrify a slide show!

Then—color really "sings". . . *Then*—details stand out crisp and clear. *Then*—audiences get maximum value from every transparency.

There's a Kodaslide Projector to meet requirements for office, classroom, or auditorium. See your Kodak dealer or write for literature:

EASTMAN KODAK COMPANY
Medical Division, Rochester 4, N. Y.

Complete line of Kodak Photographic Products for the Medical Profession includes: cameras and projectors—still- and motion-picture; film—full-color and black-and-white (including infrared); papers; processing chemicals; microfilming equipment and microfilm.

Serving medical progress through Photography and Radiography

Prices include Federal Tax where applicable

Kodak
—a trade-mark since 1888

LACTINEX®

TABLETS

for Diarrhea

● Lactinex Tablets contain a standardized viable mixed culture of Lactobacilli acidophilus and bulgaricus with the naturally occurring metabolic enzymes that are produced by these organisms.

Lactinex Tablets are of definite value in reestablishing the normal physiology of the intestinal tract in gastrointestinal disturbances in infants and adults.

Lactinex Tablets are highly effective in the treatment of uncomplicated diarrhea, including that due to antibiotic therapy.

Dosage: Two to four tablets 3 or 4 times a day with at least one half glass of milk.

Supplied in bottles of fifty tablets.

HYNSON, WESTCOTT & DUNNING, INC., Baltimore 1, Maryland

SOUTHERN MEDICAL JOURNAL

JOURNAL OF THE SOUTHERN MEDICAL ASSOCIATION

PUBLISHED MONTHLY BY THE SOUTHERN MEDICAL ASSOCIATION AT BIRMINGHAM, ALA.

Volume 47 APRIL 1954 Number 4

CESAREAN SECTION*

ANOTHER TECHNIC OF LOW CERVICAL WITH EXTRAPERITONEAL DRAINAGE

By GUY T. VISE, M.D.
Meridian, Mississippi

A new type of cesarean section, which I wish to report, has been used by me since 1947. This operation has the advantage of being as easy to perform as the familiar low cervical section, and it affords the safety of an extraperitoneal section. It has a definite place in our surgical armamentarium and fulfills a need in obstetrical work. I have reduced the number of cesarean sections 75 per cent since developing this safer way of doing a section when labor has been long and the case is infected, or potentially infected. Since the death rate from elective cesarean section is very low, more elective or early sections are being done every year.[1,2] The low death rate does not give the whole picture. The mother is left with a scar in the uterus, making subsequent cesarean sections advisable and thus limiting her family. Extraperitoneal cesarean sections have not been popular with all leading specialists and consequently have not saved the number of lives hoped for. Many still do cesarean hysterectomy as the operation of choice in an infected, or potentially infected, case. J. P. Greenhill[1] says that he never uses the extraperitoneal cesarean. At the Sloane Hospital, no extraperitoneal cesareans have been done in the last five years.[2] Is it true that extraperitoneal cesarean section without drainage carries a higher mortality and morbidity rate than a low cervical cesarean section without drainage? If so, a low cervical cesarean with extraperitoneal drainage may be an improvement on both methods.

The purpose of each pregnancy is to produce a live baby, so the baby is to be considered in cesarean section. The neonatal mortality is 4.5 times higher in babies delivered by cesarean section than by the vaginal route. Also 57 per cent of the neonatal deaths delivered by cesarean were in the babies weighing less than 5½ pounds.[1] The hazard of prematurity is always great when elective cesarean is done.

D. N. Danforth,[3] in February 1953, said:

"Most deaths in obstetrics are due to intervention rather than lack of intervention. So long as there is any question as to whether intervention is indicated, it is best deferred until positive and unequivocal indications arise."

Fear has caused an ever increasing number of cesarean sections to be done, especially since they can be done with relative safety. Many women are never given a good chance to deliver, but have a cesarean done for cephalo-pelvic disproportion about the time that real, effective, second stage labor pains begin. Fear of infection if cesarean is delayed is often the cause of unnecessary cesarean intervention. When the going is a little rough, cesarean is such an easy and early way out for a nervous patient, nervous father, and nervous doctor that it is time to consider our actions. With more and more hospitals being made available to doctors and patients by the Hill-Burton Act and other means, it is quite possible we are seeing only the beginning of the cesarean vogue.

There are four types of cesarean sections in use today: (1) the classical; (2) the low cervical; (3) the extraperitoneal; (4) the cesarean hysterectomy. I wish to add a fifth: the low cervical with extraperitoneal drainage, which will fulfill the need for, and largely replace, the extraperitoneal and the cesarean hysterectomy.

The technic of the cesarean I have devised is easy to perform; it affords more safety to the mother and the baby than any other method; it gives the doctor security in allowing all borderline cases to go ahead and deliver, which they will nearly all do; its use can reduce the number of cesareans performed to a minimum with safety.

*Read in Section on General Practice, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

With chemotherapy and antibiotics, the need for the extraperitoneal and the cesarean hysterectomy may be relegated to the past. Greenhill[1] says:

"The availability of new antibiotics will eliminate the argument that the extraperitoneal operation is safer in potentially or actually infected patients."

On the other hand, McCall[4] says that 38 per cent of all cesarean deaths are due to infection; that chemotherapy and antibiotics will not save a patient who needs drainage of pus under pressure; that he will continue to use extraperitoneal section in infected cases "until some simpler method, not yet known, appears to take its place."

I believe I have that method. The method I am using is a transperitoneal low cervical with a puncture wound through the lower uterine segment. The lower segment is opened transversely with my index fingers without cutting the lower uterine segment. After delivery of the fetus and closure of the lower uterine wound, an extraperitoneal Penrose cigarette drain is very easily inserted through the perivesical space *(Fig. 1* to *Fig. 6)*.

Thaddeus L. Montgomery, discussing a paper by McCall[4] said:

"The important factor in the extraperitoneal operation is the establishment of a tract for thorough drainage of the extraperitoneal field following operation."

The cause of death in low cervical cesarean has been mainly, localized infection beneath the bladder flaps of peritoneum that rupture through the suture line and cause peritonitis or general sepsis, before the surgeon can decide to open and drain this site of infection. Contained pus under pressure cannot be controlled with drugs or antibiotics. Drainage is necessary. For these reasons, and since relatively few surgeons do extraperitoneal sections often enough to be proficient in their execution, it may again wane in its usage.

Some one has said there is nothing new under the sun. In reviewing some of the literature, I find that the bull was the first to puncture the uterus with his horns. This method was quite satisfactory for that time, since 11 cesareans were reported by cattle-horn lacerations with 7 of the 11 mothers living, which was a better survival rate than in those performed by surgeons of that time.[6] Enlarging the ends of the cesarean incision by tearing with the fingers was recorded by A. F. A. King in his book on obstetrics published in 1903. King[6] said that tearing was safer than scissors for enlarging a uterine incision, since there was less chance of injuring the bladder.

I also found the elevation of the patient, to allow amniotic fluid to spill out of the lower portion of the abdominal wound was not new, but was observed by Felkin in Uganda, in central Africa, in 1879, who saw a native doctor elevate the patient to allow the amniotic fluid and blood to spill out of the peritoneal cavity.[5,7] He also recognized the use of anesthesia and antisepsis by giving the patient banana wine to dull the pain and then by using banana wine to cleanse the abdomen. This native doctor of Uganda also washed his hands before the operation as well as after it. The patient lived.

Period of Time Method Has Been Used.—I have used my present technic since 1947. I have no large series of cases to report. One thing is certain: a marked decrease in the number of cesarean sections in my practice has occurred without a mortality. There has been a 75 per cent decrease in the number of cesareans performed. This reduction would be greater if repeated cesareans were not included.

Selection of Cases for Cesarean.—There are some cases in which we are very certain that delivery from below cannot be accomplished. These should have an elective cesarean section as near the time for delivery as possible. The most accurate method that I know is by vaginal examination to determine when the cervix is ripe. A ripe cervix is one that is thinned out and beginning to open. This is usually two weeks before delivery. If the cervix is long, thick and closed, I recheck closely the calculated due date. In the cases of elective, or repeated cesarean, we find many of the premature infants. An easily and carefully done vaginal examination has little, if any, relation, to post-partal or post-cesarean sepsis. Its relation is coincidental rather than real. More manipulation is necessary in a rectal examination to ascertain the same facts that can be more safely and accurately learned by vaginal examination. I discontinued the use of rectal examination many years ago and have seen no need to revert to them. Cases for elective or repeated cesarean are checked by vaginal examination at each visit from the seventh month on. Since using this method there have been no premature babies by cesa-

rean section due to miscalculation based on the last menses.

Cases not definitely requiring a cesarean should be given trial labor. Among these are the numerous borderline cases of young girls not fully developed. Unfortunately, we are unable to determine accurately by x-ray or any other diagnostic means, whether or not a woman can be safely delivered. In our dilemma, we are doing more cesareans every year that probably would deliver easily if given the opportunity.

Trial Labor.—Trial labor sometimes (and I may say most times) is not really carried out. We fool ourselves and our patients. Sometimes the patient has never really been in labor, has just had "false" (which is an error) labor pains. True labor starts with regular pains which increase in intensity and duration, with a regular progressive decrease in the time interval between pains. When this is not the picture, the patient is not in labor. Lightening pains send many patients to the hospital. The doctor finally gives something to increase the pains, since the patient has made no progress; she never goes into true labor, but has a cesarean because of an unsuccessful "trial labor." This error misleads both the patient and the physician. Under such a delusion, the doctor becomes convinced that all previous statistics are wrong and that his patients may require a 10 per cent cesarean rate for good, safe obstetrical care. This over-all high rate of cesareans will be lowered only when the physician himself knows that he can safely do a section late in labor in an infected, or potentially infected, case. Our "ready-section" man is probably no more, or perhaps not so much, to be blamed as are the not so numerous cesarean-hysterectomy men. The latter are usually considered to be more scientific and better qualified.

Trial labor should be true labor, with good pains at regular intervals, growing progressively stronger and closer together. Exhaustion can stop this sequence and should be treated by sedation with morphine grains 1/4 and nasal oxygen. Exhaustion anoxia can be just as dangerous to the newborn as morphine sedation. A trial labor is not complete unless the membranes rupture, or are ruptured artificially, when the cervix has almost fully dilated. Polyhydramnios may be the cause of uterine inertia and the inertia may be relieved after leakage of the amniotic fluid with adequate time allowed for recovery from overdistension and exhaustion. The duration of any borderline case for trial labor should usually be at least twenty-four hours, or longer.

Preoperative Preparation.—When a trial labor has been long, hard and exhausting, the patient should be receiving nasal oxygen. The extra energy from the oxygen will shorten labor by making the pains more effective. If heavy sedation has been used, operation should be delayed until its effects are well worn off; then there will be little depression of the respiratory centers of the fetus. Rupture of the membranes is necessary for good trial labor and should be done artificially if it does not occur spontaneously. It is usually possible to elevate the head of the fetus by vaginal manipulation, to allow the amniotic fluid to escape without danger of prolapse of the cord. Spilling amniotic fluid, with its urine, bile and digestive juices, into the peritoneal cavity causes sterile chemical peritonitis and ileus in early elective sections. I prefer that any remaining amniotic fluid be drained off vaginally just before operation. Antibiotics are given preoperatively and during labor if it is a long, hard labor. No sedation is given preoperatively. Atropine grains 1/150 is given by hypodermic.

Anesthetics.—Spinal anesthesia is usually safest for cesarean section, since it does not depress the fetus. Local and caudal are also safe for the baby, but are time-consuming. Ether is my preference of the general anesthetics. All of the above have been used by me during the past six years in these cases. I prefer spinal unless it is definitely contraindicated.

Technic of Operation.—A midline or a transverse incision is made. Dry gauze packs are placed on either side of the uterus. The bladder fold of peritoneum is opened widely from side to side and the bladder is pushed down very low from the uterine segment with a sponge forceps. The ureters and fascia are also pushed laterally. If any bleeders are encountered, they are ligated. A puncture wound is then made through the thin lower uterine segment, using forceps, curved scissors, or just the index finger. Inserting both index fingers and exerting lateral traction, the thin uterine segment is easily opened transversely. This is done slowly and care-

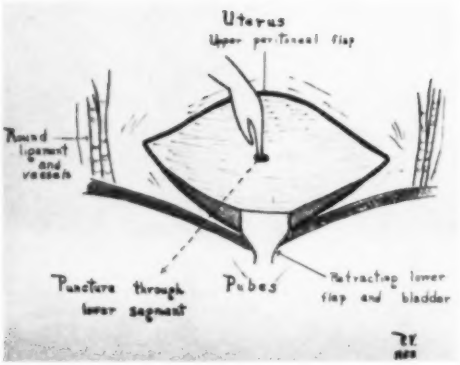


FIG. 1

Abdominal wall has been opened through midline incision. The bladder flap of peritoneum has been opened, bladder retracted, puncture wound made in lower uterine segment with index finger.

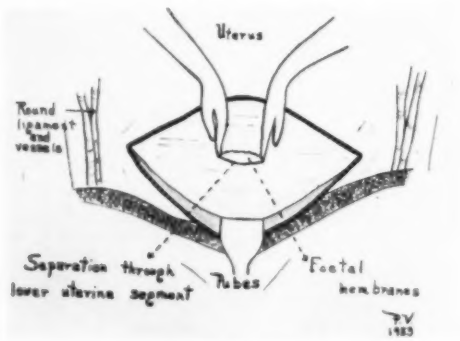


FIG. 2

Lower uterine segment separated transversely by lateral traction with index fingers.

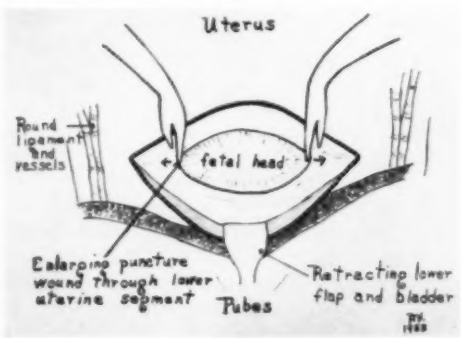


FIG. 3

Fetal head presenting through the lower uterine segment opening.

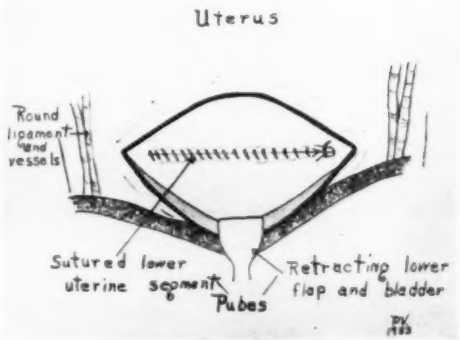


FIG. 4

The fetus, placenta and membranes have been delivered. The transverse lower uterine opening has been closed with two rows of continuous chromic suture.

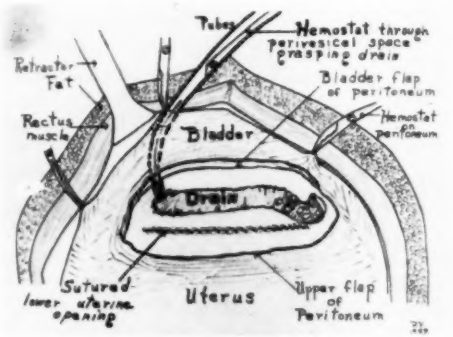


FIG. 5

The rectus muscle is retracted laterally. Large curved hemostat is passed outside the parietal peritoneum through the perivesical space to the lower uterine segment. Penrose drain is grasped with this hemostat.

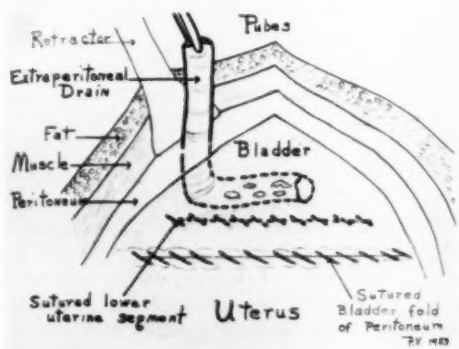


FIG. 6

The Penrose drain has been pulled through the perivesical extraperitoneal space and emerges in the midline incision beneath the rectus muscle. The bladder fold of peritoneum has been closed carefully with chromic suture.

fully. There is no need for it to extend into the uterine arteries and vessels of the broad ligaments or to the ureters. With a finger or blade of an obstetrical forceps, the head can be elevated and delivery slowly and carefully done with pressure on the fundus of the uterus. After delivery of the head and shoulders, I clear the nostrils and pharynx of fluids and mucus with a suction bulb. After respiration starts, delivery is completed. Waiting for respiration to begin before delivery is completed allows the fetus to receive oxygen through the placental circulation. This can lower the infant mortality rate since poor oxygenation is now considered the chief cause of thrombosis of the cerebral vessels leading to immediate or delayed mortality of the infant. As long as most of the infant's body is still inside the uterus, it does not become chilled or shocked if spontaneous respiration is delayed. After complete delivery of the infant, the operating surgeon has adequate time to see that the infant is in good condition before sending it to the nursery, since there is no bleeding from the uterine sinuses and vessels until the placenta is separated. The cord is clamped and cut, after stripping the blood in the cord to the infant. This amount of blood left in the umbilical cord in the usual technics of cesarean section is comparable to a 500 cc. transfusion in an adult.

Delivery of the placenta and membranes is done before intravenous ergotrate is given.

The lower uterine segment is easily closed with two rows of continuous chromic O catgut. The lateral angles, which are usually held with Allis forceps, should be very carefully closed.

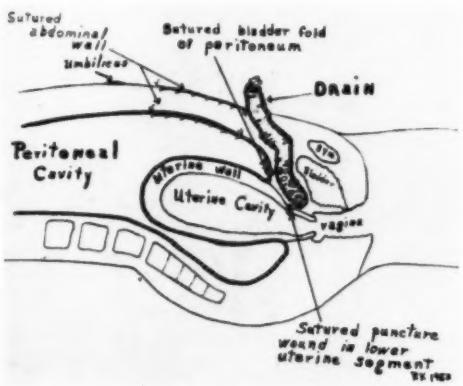


FIG. 7

Lateral view showing the Penrose drain completely extraperitoneal extending from the abdominal incision through the perivesical space to the lower uterine segment.

The extraperitoneal drain of penrose tubing is inserted by passing a curved hemostat between the peritoneum and the rectus muscle, guiding it easily through the perivesical fat down to the lower uterine segment, grasping the drain and pulling it with the hemostat back through the perivesical space and beneath the rectus muscle. Clamp, or suture, the drain to the skin to prevent it being inadvertently pulled out. Sulfa or antibiotics are "snowed" lightly over the lower uterine segment. The bladder fold of peritoneum is carefully closed to prevent any possible leaking of lochia or infection into the peritoneal cavity from the lower uterine segment wound, should it leak or break down. The peritoneal cavity is inspected for blood clots or fluid. The abdominal packs about the uterus are removed and the peritoneum is closed. Then the abdominal wall is closed in layers, bringing the extraperitoneal drain through the lower part of the incision. When a Pfannensteil or a transverse incision is made, I have used two extraperitoneal drains, bringing them out on each side of the bladder and through the lateral ends of the skin incision.

The extraperitoneal drains are removed on the fourth postoperative day, or when the patient has been afebrile for 48 hours.

Postoperative Care.—An indwelling bladder catheter is used for two days and the bladder is irrigated every eight hours. Antibiotics and sulfa drugs should be given until the patient has been afebrile for 48 hours. Ambulation as soon as the patient has completely recovered from anesthesia is encouraged, as this prevents the pooling of lochia in the uterus and vagina. Sulfa cream in the vagina is used daily. Ergotrate is given every 4 hours for five doses and sedation as needed. Liquid diet is given until the patient says she is hungry.

ADVANTAGES OF THE MODIFIED LOW CERVICAL CESAREAN WITH THE USE OF AN EXTRAPERITONEAL DRAIN

(1) It is easy to do.

(2) It is almost bloodless, as far as cesareans go.

(3) It helps prevent peritonitis and cellulitis.

(4) There is less need of blood transfusions. This is especially advantageous to the Rh negative woman.

(5) There is less chance of bladder injury than in extraperitoneal sections.

(6) There is less chance of ureteral injury than in extraperitoneal sections.

(7) Delivery is easy, and there is time to give needed attention to the resuscitation of the infant without neglecting the mother.

(8) The surgeon has access to the uterus and adnexa, and visualization of the abdominal viscera if this is desired.

(9) A transverse opening in the uterus is more easily closed than a longitudinal.

CONCLUSIONS

Apparently too many cesarean sections are being done. Fear of complications and fear of increased mortality rates make us resort to elective cesarean section as the method of delivery in too many borderline cases. Most women will deliver if allowed an adequate, long, hard test of labor with artificial rupture of the membranes.

A method for doing a safe cesarean after a long, hard labor has been presented, using the familiar and most popular low cervical approach. The uterus is not cut with a knife or scissors, but a puncture wound is made and the lower uterine segment is opened transversely with the index fingers. After delivery and closure of the uterus, one or more extraperitoneal drains are inserted through the perivesical space down to the lower uterine segment wound. The bladder fold of peritoneum is carefully closed, rendering the uterine wound extraperitoneal. With the use of this easy method of cesarean section and with chemotherapy and antibiotics, we may have little need for cesarean hysterectomy and extraperitoneal cesareans for infected or potentially infected cases.

REFERENCES

1. Greenhill, J. P.: Present Day Evaluation of Cesarean Section. Surgical Clinics of North America, pp. 87, 92, 96 (Feb.). Philadelphia: W. B. Saunders Co., 1953.
2. Titus, Paul: Management of Obstetric Difficulties. Third Edition, St. Louis: C. V. Mosby Co., 1945.
3. Danforth, D. N.: The Conduct of Abnormal Labor. Surgical Clinics of North America, p. 125 (Feb.). Philadelphia: W. B. Saunders Co., 1953.
4. McCall, Milton L.: Extraperitoneal Cesarean Section in the Profoundly Infected Patient. Amer. J. Obst. and Gyn., 57:520-531, 1949.
5. De Lee, Joseph B.: The Principles and Practice of Obstetrics. Fifth Edition, p, 1059. Philadelphia: W. B. Saunders Co., 1929.
6. King, A. F. A.: A Manual of Obstetrics. Ninth Edition, pp. 373, 385. Lea Bros. Co., 1903.
7. Newell, Franklin S.: Cesarean Section. Gynecological and Obstetrical Monographs, vol. 2, 1921.

DISCUSSION *(Abstract)*

Dr. James H. Byram, Atlanta, Ga.—It may be of interest to review the obstetrical deliveries by the vaginal route and those by cesarean section at the hospitals doing obstetrics in the city of Atlanta. For the period from 1948 to 1952 there were 81,051 deliveries with 1,224 by cesarean section, which is 1.59 per cent and that compares favorably with the national average. The private hospitals had 52,072 deliveries with 1,085 sections with a percentage of 2.05. I will break down more in detail the deliveries of the Crawford W. Long Hospital which has mostly private patients and is classified as a teaching hospital. There were during this period 26,954 deliveries with 523 cesarean sections, an incidence of 1.87 per cent. The type of cesarean sections done at this hospital were 265 low cervical, of which 239 were transverse and 26 longitudinal (50.8 per cent). There were 243 classical sections (46.4 per cent), 14 porro cesarean sections (cesarean hysterectomy) (2.4 per cent and one extraperitoneal (0.2 per cent). There were two maternal deaths, one due to severe sensitivity to one of the broad-spectrum antibiotics and the other a postoperative intestinal obstruction. The fetal mortality was 10 per cent. The operations of choice were the low cervical and there was no drainage in any of the section cases.

Cesarean sections are definitely on the increase, especially the elective ones, due to many changing factors such as the fear of vaginal childbirth, insistence of some women upon having their baby by section, x-ray diagnosis and measurement before a test of labor is tried, too short a period of test labor, the nervous husband and impatient family of the patient and the busy, nervous and overworked doctor.

I have always been an advocate of a true and carefully watched test of labor. This was impressed upon me when I was a resident in obstetrics when we had an Italian woman who had had six cesarean sections performed and was posted for the seventh at 8 a.m. She entered the hospital at 4:00 p.m., was prepared and given a soapsuds enema at 8:30 p.m. I was called to the floor by a student nurse who gave the enema, telling me that the patient's membrane had ruptured, that she had a bloody discharge and was having severe pains. I will admit I did not rush up to the floor but when I arrived a few minutes later in the patient's room she had precipitately delivered in bed a 9½ pound baby girl. This demonstrates that if this woman could deliver her seventh baby which was a large one by the vaginal route she could have delivered the other six; there were no obstetrical abnormalities. The indications for the first cesarean section were slow dilating lower uterine segments, large baby, nervous, crying and poorly sedated woman.

There is a trend among the medical profession not to evaluate morbidity as we should. We are very much interested in our mortalities and do everything in our skill and power to prevent them, but what about the morbidity? It is here that Dr. Vise's technic of drainage is important and will accomplish most.

I am very much impressed with Dr. Vise's paper and the advantages that his operation offers. They are: (1) decreased morbidity by drainage with or without antibotics; (2) decreased hospital days and more rapid convalescence; (3) an operative technic should not be more difficult or time consuming; (4) it gives patient more time for test labor with increased safety for mother and baby if section becomes necessary.

I have had no experience with Dr. Vise's operative technic so I cannot say whether it should be used routinely in all cases of low cervical cesarean, but to me it is a scientifically correct procedure for any questionably infected or potentially infected case.

CORRECTION OF PERIPHERAL PARALYSIS OF THE FACIAL NERVE BY HYPOGLOSSAL-FACIAL ANASTOMOSIS*

By Eben Alexander, Jr., M.D.
and
Courtland H. Davis, Jr., M.D.
Winston-Salem, North Carolina

INTRODUCTION

Paralysis of the facial nerve produces one of the most disfiguring deformities commonly encountered in human subjects. Several methods have been devised for the correction of such deformities, and many of them have been employed with considerable success. Suture of a divided facial nerve within the temporal bone,[3] grafting of autologous sensory nerves into a gap in the facial nerve,[13 14] and fascial slings or other plastic procedures to the face have been widely used. Each type of operation has its proponents and antagonists and it is likely that each well accepted method has its particular field of usefulness in various types of facial deformity. All operative procedures for the correction of facial paralysis have at least two things in common: first, the final result depends to some extent on the cooperation of the patient in re-educating his facial movements; and, second, in no case can the final cosmetic result during all activities of the face be expected to equal that found in the presence of a normally functioning facial nerve. The failure to recover completely normal function in the complicated motions of the human face is seen even in patients who recover function after complete degeneration of the facial nerve has occurred following spontaneous facial paralysis, so-called "Bell's palsy." Ford and Woodhall[6] have observed that in such patients who show subsequent regeneration of the facial nerve, there is never a completely normal return of the power to move individual muscles of the face on the affected side. When the mouth is moved, the eye closes, and when the eye is forcibly closed, the corner of the mouth moves. This has been attributed to the misdirection of regenerating nerve fibers from the proximal to the distal portion of the nerve and occurs whether there has been any anatomical interruption in the continuity of the nerve or not. The proximal segment of a regenerating nerve sends out multiple fibers which proceed down many or all of the channels of the degenerated distal segment. Diffuse misdirection of fibers results, neurons from numerous proximal fibers going to various distal fibers which were not supplied by them before. The observation of associated movements of the face following regeneration of a previously paralyzed facial nerve has been seen on many occasions and a careful examination of the facial movements of such patients shows this deviation from the normal.

The technic of nerve grafting is not applicable to those patients with facial paralysis resulting from intracranial division of the facial nerve.[5 9] The anastomosis of other cranial nerves to the facial nerve has been widely used, particularly by neurosurgeons in whose experience facial paralysis is usually found after complete removal of acoustic neuromas.[4 10] Such operations are the choice of various other surgeons[2 7] who are called upon to restore facial function after division of the facial nerve in mastoid operations. Others primarily interested in plastic surgery[8] are of the opinion that the associated movements resulting from anastomosis of the hypoglossal or spinal accessory nerves to the facial nerve are frequently more conspicuous than the

---

*Read in Section on Neurology and Psychiatry, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

*From Division of Neurosurgery, Bowman Gray School of Medicine, Winston-Salem, North Carolina.

original facial paralysis. The plastic repair of facial paralysis with fascial slings from the temporal muscle is advocated. Our experience with such procedures is limited and not adequate to compare the results with those of hypoglossal-facial anastomosis. The opportunity to examine the function of the face in a large group of patients who had had anastomoses of various cranial nerves to facial nerves divided within the skull left a favorable impression of the functional and cosmetic results of hypoglossal-facial anastomosis as indicated in a previous report by McKenzie and Alexander.[11] A detailed report of the cases which formed the background of that brief paper was not included. There were, however, in that group of patients, 42 who had had hypoglossal-facial anastomoses three and one-half months to 15 years previously, of whom 33 were personally examined with special reference to facial function. These observations have been further extended in the three years since that report and the opinions reached at that time have not been altered by further experience. In every case there was definite movement of the previously paralyzed side of the face with voluntary movement of the tongue. In some this movement was slight, in others it was greater than the normal side. Results of the hypoglossal-facial anastomosis were graded as follows:

Excellent: Face symmetrical at rest, the mouth moved in an almost normally animated fashion in talking, and the patient was able to smile without obvious distortion of the face.

Good: Symmetry of face at rest but disturbance of symmetry during talking, eating, or emotional expression.

Fair: Movement on the affected side of the face or movement of the tongue, improvement over the previous state of complete paralysis, but some asymmetry even at rest.

Under this classification 12 patients were considered to have excellent results, 14 good, and seven fair. There was movement around the mouth in all cases, movement about the eye in most cases, but movement of the forehead in only a few. The forehead was never wrinkled in a normal fashion. Excessive associated movements of the muscles about the eye, either during conversation or during the process of mastication were occasionally seen. Individuals who rarely smile and who display little emotional expression are likely to show the best results after hypoglossal-facial anastomosis since it is in the outbursts of laughter that the face is most often pulled to the normal side without any function appearing on the side of the anastomosis. Interestingly enough, two of the patients observed were blind and rarely showed any emotional expression. In these individuals it was difficult during casual observation to determine which side of the face was abnormal or disturbed in function. The paralysis of one side of the tongue which occurs after hypoglossal-facial anastomosis does not interfere with speech or eating on the part of the patient postoperatively. Usually atrophy of the tongue on the operative side is complete but occasionally it may be barely apparent a year or two after operation.

The results following spinal accessory-facial nerve anastomosis are not, in general, so satisfactory as those following hypoglossal-facial anastomosis. Although such individuals show symmetry of the face in repose, there is no animation during conversation and the face is frequently grossly distorted to the operated side by movements of the ipsilateral shoulder. Furthermore, the paralysis of the upper portion of the trapezius muscle which occurs following section of the spinal accessory nerve is in many patients a very disabling sequel to the procedure. The inability to elevate the arm above the horizontal plane, the outward displacement of the scapula, and the pain that sometimes results in the shoulder constitute additional contraindications to this particular procedure for the correction of facial paralysis except in certain selected cases.

Beginning recovery of function after hypoglossal-facial anastomosis may be apparent in six weeks but usually two or three months pass before it is apparent that the face is becoming more symmetrical. Continued increase in function may be expected over a period of six to eight months. In one patient the hypoglossal-facial anastomosis was not performed until two years and five months after the facial nerve had been divided intracranially. This patient obtained an excellent result of the anastomosis with regard to recovery of facial function. It is advisable to perform the anastomosis as soon as one is

sure the facial nerve has been sacrificed and as soon as the general condition of the patient will permit the anastomosis which can be carried out under local anesthesia.

TECHNIC

The operative method of nerve suture is well known and will not be described in detail. An incision is made from the mastoid process transversely in line with the normal skin creases of the neck forward for a distance of 6-8 cm. The hypoglossal and facial nerves are identified and the former divided distally, proximal to the point at which it branches to supply the muscles of the tongue *(Fig. 1)*. The identification of the facial nerve is sometimes facilitated by separating the anterior insertion of the sternocleidomastoid muscle from the tip of the mastoid process. Palpation of the styloid process locates the position of the stylomastoid foramen through which the facial nerve gains exit from the skull. The facial nerve is divided as close to the skull as possible. The proximal end of the hypo-

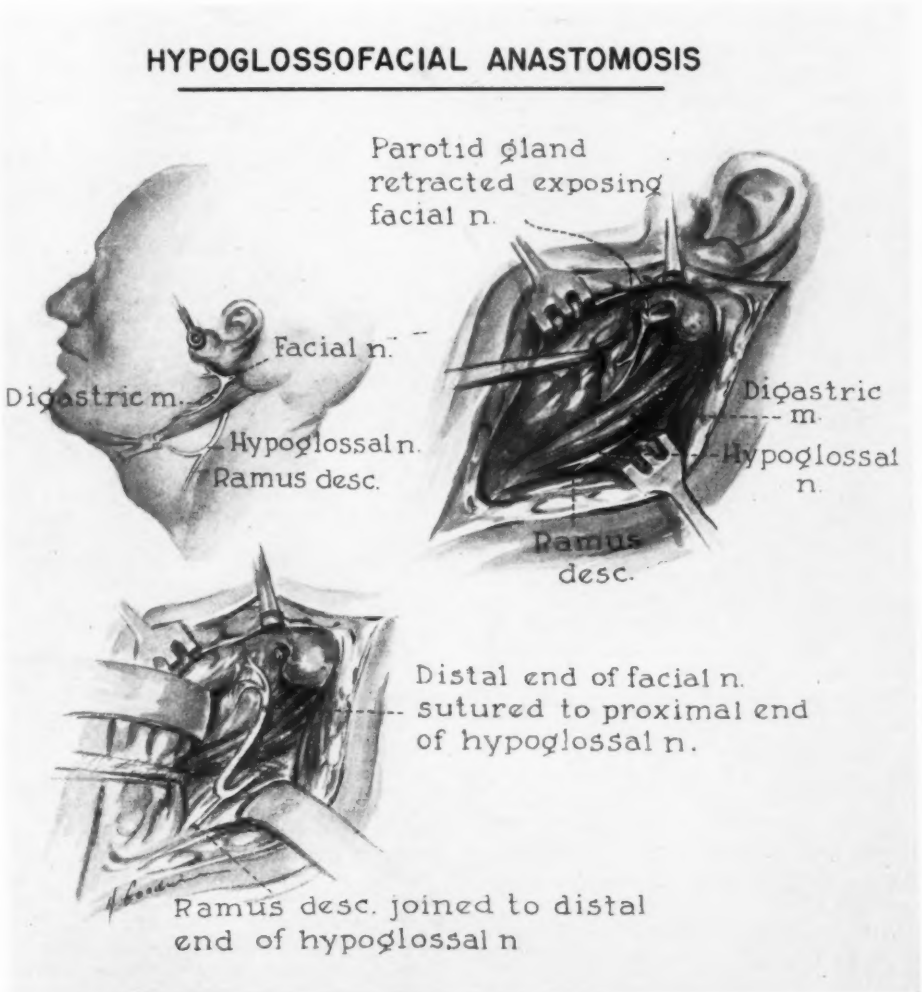


FIG. 1

Artist's drawing of the operative procedure for correction of facial paralysis by hypoglossal-facial anastomosis. It is not usually necessary to expose the facial nerve at the parotid gland, since it can usually be isolated proximal to that point at the stylomastoid foramen.

glossal nerve is approximated to the distal end of the facial nerve by three or four fine silk sutures taken through the epineurium. The anastomosis is done either superficial or deep to the digastric muscle and entirely without tension. No sheath is placed around the anastomotic site. If the descendens hypoglossi is of large size and convenient location, it is divided as far distally as possible and the proximal end sutured to the distal stump of the hypoglossal nerve.[12] This may minimize subsequent atrophy of the side of the tongue on which the hypoglossal nerve has been used for anastomosis, although the atrophy that occurs is rarely an annoyance to the patient. It is possible to perform hypoglossal-facial anastomosis in patients who have lost the main trunk of the facial nerve and the so-called *pes anserinus* as a result of radical operations on the parotid gland. In such cases the main branches of the facial nerve may be dissected out, the proximal end of the hypoglossal nerve divided into three or more divisions and these sutured to the distal main branches of the facial nerve.

SUMMARY

(1) The anastomosis of the hypoglossal to the facial nerve for permanent peripheral paralysis of the facial nerve has been described.

(2) This procedure offers an excellent method for the restoration of facial function. The recovery of facial function after any nerve anastomosis or plastic procedure is never perfect but hypoglossal facial anastomosis usually results in symmetry of the face in repose and animation of the face during conversation.

(3) There has been some degree of recovery of function in all postoperative patients observed by the authors, but at least 75 per cent of the results have been considered good or excellent.

(4) Recovery of facial function after hypoglossal-facial anastomosis may take place even though paralysis of the face has existed two years prior to the operation.

(5) This procedure may be applicable to those cases in which it has been necessary to sacrifice the *pes anserinus* of the facial nerve for operations on the parotid gland.

BIBLIOGRAPHY

1. Browder, J.: Personal communication.
2. Brown, A.: Results of Hypoglossofacial Anastomosis for Facial Paralysis in Two Cases. Surg., Gynec. and Obst., **42**:608-613, 1928.
3. Bunnell, S.: Suture of Facial Nerve Within Temporal Bone, with Report of First Successful Case. Surg., Gynec. and Obst., **45**:7-12, 1927.
4. Coleman, C. C.: Results of Facio-hypoglossal Anastomosis in the Treatment of Facial Paralysis. Ann. Surg., **111**: 958-970, 1940.
5. Dandy, W. E.: Results of Removal of Acoustic Tumors by the Unilateral Approach. Arch. Surg., **42**:1026-1033, 1941.
6. Ford, F. R.; and Woodhall, B.: Phenomena Due to Misdirection of Regenerating Fibers of Cranial, Spinal and Autonomic Nerves: Clinical Observations. Arch. Surg., **36**:480-496, 1938.
7. Gibson, A.: Facial Paralysis. Surg., Gynec. and Obst., **33**:472-489, 1921.
8. Greeley, P. W.: Plastic Surgical Repair of Facial Paralysis. Arch. Surg., **56**:132-137, 1948.
9. Horrax, G.; and Poppen, J. L.: Experiences with Total and Intracapsular Extirpation of Acoustic Neuromata. Ann. Surg., **110**:513-524, 1939.
10. Learmonth, J. R.: Anastomosis of Hypoglossal and Facial Nerves Ten Months After Operation: Presentation of Case. Proc. Staff Meet., Mayo Clin., **7**:389-390, 1932.
11. McKenzie, K. G.; and Alexander, Eben, Jr.: Restoration of Facial Function by Nerve Anastomosis. Ann Surg., **132**: 411-415, 1950.
12. Spurling, R. G.: Personal communication.
13. Sullivan, J. A.: The Surgical Treatment of Facial Palsy by an Autoplastic Nerve Graft. Canad. Med. Assn. J., **31**:474-479, 1934.
14. Tickle, T. G.: Surgery of the Seventh Nerve. J.A.M.A., **136**:969-972, 1948.

DISCUSSION *(Abstract)*

Dr. James G. Lyerly, Jacksonville, Fla.—I agree with Dr. Alexander 100 per cent. In all of the facial palsies which I have operated upon, I have used the hypoglossal nerve in preference to the spinal accessory. I felt that the function of the tongue was more closely related to that of the facial movements than that of the shoulder, which the spinal accessory supplies.

I think we get as good functional results from facial paralysis after a hypoglossal-facial anastomosis as after a severe case of Bell's palsy which has existed for three or four months. These cases never have good functional results because of mask-like facial movements.

As the pictures of Dr. Alexander show, the patients with hypoglossal anastomosis have very good results with pleasing symmetry of the face in repose.

I think the best time to do these operations is as soon as possible after the facial paralysis has occurred provided a sufficient time has existed for spontaneous recovery. This waiting period probably should be six months.

Trauma of the facial nerve associated with fracture of the base of the skull and brain injury will usually clear up in this period of time. Facial paralysis due to neuritis following mastoiditis or middle ear disease also will clear up in time.

The earlier we can do these operations, the better the results, because the facial muscles themselves will not have undergone so much atrophy.

I have seen some cases of facial paralysis which had existed ten to fifteen years, and I have refused to operate upon them, because there was too much atrophy with fibrous tissue changes in the muscles. There

is no use to anastomose the nerve when one has reason to suspect that functional muscle fibers have disappeared.

The best time to operate upon these cases is during the first two or three years, before too much atrophy has taken place.

Sometimes we see the facial paralyses following removal of large parotid tumors. I have always felt that probably these parotid tumors should be operated upon by neurosurgeons, to save the facial nerve. With an electric stimulator, we can find the nerve fibers and save them.

In a case recently the surgeon had done a radical removal of this type of tumor and the facial nerve was destroyed. I undertook to dissect out the individual branches, and found peripheral and central ends of the nerve and was able to get them together. But, often, the nerve is destroyed, or there is such a wide gap between the ends that they cannot be approximated.

In that case, one has to rely on the plastic surgeon for fascial graft slings to support the sagging soft tissues of the face.

Dr. William R. Chambers, Atlanta, Ga.—I should like to ask what type of physiotherapy Dr. Alexander uses as an adjunct, and to what extent.

Dr. Alexander (closing).—Dr. Lyerly's point, about doing a procedure early, is certainly well taken. We have, in general, followed that course usually, I think, doing the procedure about seven days after an acoustic tumor is out, if the patient withstands the original operation satisfactorily.

One patient had gone 2½ years after removal of an acoustic tumor with facial paralysis. She had gone home; no one had been able to find her until we tracked her down through the Department of Welfare; we sutured her hypoglossal nerve to her facial nerve. She obtained a good result one year later.

I have done a nerve suture after four years, with some misgivings. As far as I can make out, the patient has had no recovery at all. I do not know whether that offers an estimate of what the limit is, 2½ to 4 years. I doubt that it is accurate.

Most of the patients described here had no form of physiotherapy whatever. The astonishing thing was that the blind patients, as I indicated, who could not feed themselves or look in a mirror or see what their motions were, had the best results of all. I have seen many patients who had electric stimulations of their facial muscles for many months, who I do not think had any better results than the patients who had nothing of the kind. It may be that the face, being a mobile unit anyway, with the other side of the face moving spontaneously, provides its own physiotherapy. I do not mean to deprecate physiotherapy, but I do not believe it has much place here.

We run into the problem of the patients with Bell's palsy getting into the hands of osteopaths and chiropractors, and being told that, unless they have a stimulus to their face every day for six months or so, they will not get a good result.

In my experience, they get about 85 per cent recovery from Bell's palsy, which is almost identical with the results if nothing is done.

SPONTANEOUS REGRESSION OF NEOPLASMS*

AN EXPERIMENTAL STUDY IN THE DUCK

By R. H. RIGDON, M.D.
Galveston, Texas

Spontaneous regression of neoplasms may now be regarded as scientifically established;[1] however, it is an infrequent process. In 1918 Rohdenburg[2] critically reviewed the literature referable to the spontaneous recession of neoplasms. He concluded that

"regressive changes varying from a temporary standstill to the complete disappearance of the tumor, whether it be of epithelial or connective tissue origin, may occur at any age period, in either sex and irrespective of the location of the growth. Though no accurate data can be given for the frequency of complete regression, Bashford has estimated that it occurs about once in a hundred thousand cases."

In 1938 Touraine and Duperrat[3] reviewed this problem of spontaneous regression of neoplasms in man, including both clinical and histological observations. In 1950 Park and Lees[4] discussed regression of tumors in relation to choriocarcinomas. They said:

"There can be no doubt that sometimes choriocarcinomas, either the primary tumor or its metastases, or both, can undergo spontaneous regression."

Bartley and Hultquist[5] have expressed the opinion that

"regressive changes such as fibrous transformation in conjunction with hyalinization, calcification and ossification often occur in connection with hypernephroma. Cases are on record in which the findings were considered to indicate a disappearance of metastases in the lung after excision of a hypernephroma."

Stewart[6] recently discussed spontaneous regression of neoplasms in man; however, he emphasized the fact that "spontaneous" was being used to indicate regression where therapy was used, either in an insufficient amount

---

*Read in Section on Pathology, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

*From Laboratory of Experimental Pathology, University of Texas Medical Branch, Galveston, Texas.

*This investigation was supported in part by a research grant P.H.S. C—1469—(C) from the National Cancer Institute, of the National Institutes of Health, Public Health Service.

*Illustrations were prepared by Mr. F. W. Schmidt, Medical Photographer at the Medical Branch.

to cure the lesion, or it was not even directed to the site of the disease. He cited a case of uterine myosarcoma treated by a radium bomb. Immediately before the completion of treatment and within the course of almost hours, the patient developed a high fever, an urticarial rash, a high eosinophilia, and within a few days lost kilos of tumor and ascitic fluid. Ten years later the patient was well. Stewart[6] also reported two cases of neuroblastomas that regressed following small amounts of irradiation. These children were perfectly healthy five and 14 years later. A tumor was considered by Dr. Whipple to be an inoperable malignant hepatoma in a white female. Twelve years later death resulted from an accident and the hepatic neoplasm was found to be completely fibrotic and only traces of atrophic tumor cells could be found.[6]

Although exceedingly rare, experimentally induced and spontaneous occurring cancers have been known to regress completely in mice.[7-9] Woglom[7] found that among 2,000 mice having spontaneous tumors, 13 regressed and three fluctuated or remained stationary. The frequency of spontaneous regression of tumors in mice is much higher than that observed in man. The spontaneous regression of a mammary carcinoma in two mice, in which there was replacement of the splenic follicular and sinusoidal architecture with sheets of large mononuclear cells, prompted Black and associates[10] to study lymph nodes in human cancer to determine whether any association could be found between the microscopic appearance of the regional lymph nodes and the biologic behavior of the tumor.

The mechanism by which this spontaneous regression in neoplasms occurs is unknown. Rohdenburg[2] was impressed by the occurrence of high fevers in some of his cases. This elevated temperature was due to smallpox, pneumonia, erysipelas, malaria and acute tuberculosis in the cases that showed regression of the neoplasm. Haaland[11] suggested that a change must occur within the tumor cell to explain this phenomenon of regression. Woglom[7] concluded from his experimental observations in mice that

"the factor responsible for spontaneous cure appears to reside neither in the stroma nor in the parenchyma of the tumor, though the latter cannot be entirely eliminated. By exclusion, only the blood vessels remain, but it cannot be shown from the material here discussed that vascular changes underlie spontaneous cure."

Black and associates[10] found a direct correlation between the occurrence of marked sinusoidal and follicular histocytic transformation and myeloid-like changes in the nodes and the survival of human cases with cancer of the breast. This would suggest some relationship between the reticuloendothelium system and resistance to tumors.

Pollard and Bussell's[12 13] *in vitro* observations are interesting referable to the inhibition of growth of methylcholanthrene induced-tumor tissue when the transplants are grown in the presence of splenic tissue obtained from mice previously inoculated subcutaneously with methylcholanthrene. These investigators found that

"the tumor-destructive effect could not be demonstrated with 'normal' spleens, nor with the spleens from mice supplying the tumor tissue."[13]

This reaction also could not be induced with spleens from mice treated with other carcinogens. Furthermore, when a carcinogenically-induced transmissible tumor involuted, the recovered host was refractory to reinoculation with the same tumor.

The recent observations of Huggins[14] have emphasized the role of hormones on the regression of certain neoplasms. In 1896 Beatson[15] referred to three cases of a malignant growth in the breast that receded following castration. Similar observations have been made by Lett.[16]

The fact that spontaneous regression does occur in neoplasms should be a stimulus for further study of this phenomenon. The present study was stimulated by the observation that some of the neoplasms developing in white Pekin ducks, following the local application of methylcholanthrene to the skin, spontaneously regressed and ultimately completely disappeared.[17]

Papillomas, squamous cell carcinomas, hemangiomas and fibromas have been observed to occur in ducks following the local application of a 0.25 per cent solution of methylcholanthrene in acetone to the skin daily for a period of one month.[17] The majority of these neoplasms have been followed grossly and photographed at intervals. Some have been removed for histological study, while others have been biopsied. This study has

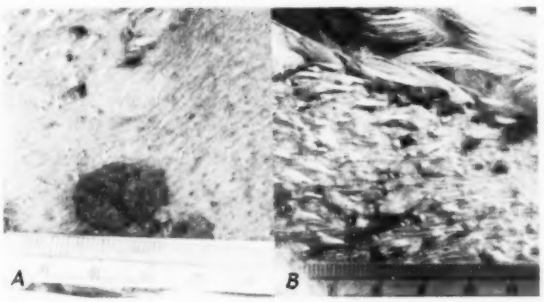


FIG. 1

(A) Duck 480. Papilloma 68 days following the first local application of a 0.25 per cent acetone solution of methylcholanthrene to the skin. This carcinogen was applied daily for 30 days to all ducks unless otherwise stated.
(B) Duck 480. Regression of papilloma during a period of two months.

been in progress for approximately three years and 100 or more ducks have been observed. The number of tumors occurring in a single bird has varied from one to 15. Papillomas, squamous cell carcinomas, fibromas and hemangiomas frequently are present in the same duck. The rate of growth, the maximum size and the rate of regression varies widely in the different tumors and in the different birds.

Papillomas have been the most frequent type of tumor observed. There is a wide variation in the size of these neoplasms. Although they usually occur in the area of the skin where the methylcholanthrene is applied, some have developed about the head apparently as a result of the birds' preening themselves. The papilloma in duck 480 *(Fig. 1-A)* was present on the sixty-eighth day following the time of the first application of the carcinogen. Two months later it was represented by a small fold of skin *(Fig. 1-B)*. The histologic characteristics of such a papilloma are shown in *Figure 2*.

Papillomas usually begin to appear about one month following the time the application of methylcholanthrene is discontinued and continue to appear for two to three months. They usually become dry and gradually small portions desquamate until the entire lesion disappears. This usually occurs within a maximum period of two months. The largest papilloma we have observed was 2 cm. in diameter and 1.5 cm. in height. Nothing peculiar has been noted in the histologic study of these papillomas.

There have been a few papillary growths, very similar to the lesions just described, except that the base frequently bled. A microscopic study of such lesions has shown a squamous cell carcinoma (duck 240, *Fig. 3*). Duck 411 had a papillary lesions 1.3 x 1.2 x 0.4 cm. on the wing 79 days following the first application of methylcholanthrene *(Fig. 4-A)*. A biopsy was removed from this tumor at that time. The lesion subsequently became dry and necrotic and two months later had completely regressed *(Fig. 4-B)*. Histologically there was considerable necrosis with squa-

FIG. 2

Duck 407. Papilloma removed 60 days following the first application of methylcholanthrene to the skin (H & E stain, x 66).

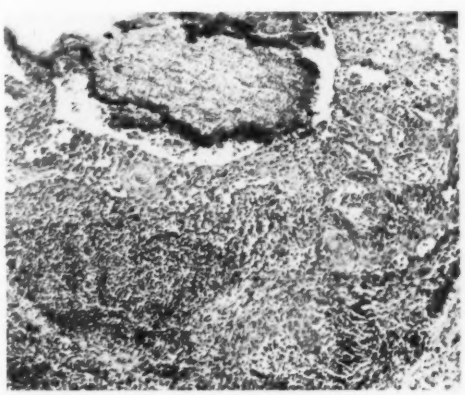


FIG. 3

Duck 240. Squamous cell carcinoma in skin 63 days following the first application of methylcholanthrene (H & E stain, x 96).

mous epithelial cells about the periphery of the degenerating tissue *(Fig. 4-C)*. Duck 475 had a similar papillary tumor 1.5 x 0.8 cm. on the sixty-fourth day after the methylcholanthrene was first applied. A biopsy was removed at that time. The remaining portion of the tumor became necrotic and dry and completely disappeared within a period of two months. Histologically the biopsy showed an ulcerated lesion extending out from the side of a feather follicle. Squamous cells were infiltrating the surrounding stroma.

From two to three months following the time the methylcholanthrene was discontinued, small, round, smooth or irregular tumors, the color of the normal skin, were observed. Some of these were attached by a very narrow pedicle and frequently grew out of a feather follicle, while others were attached to the underlying tissues by a narrow base.[18] The former tumors were round and seldom reached 1.0 cm. in diameter *(Fig. 5-A)*. This particular lesion spontaneously disappeared within 48 hours after the photograph was made. These neoplasms were composed of fibrous tissue and the periphery was covered by squamous epithelium. Several of these fibromas have shown large collections of lymphocyte-like cells *(Fig. 5-B,* duck 265). It appeared from the histological studies of these fibromas that the number of lymphocytes was greater within the older tumors.

Hemangiomas were numerous in these methylcholanthrene-treated ducks.[17] These tumors began to appear approximately two months after the last application of the carcinogen. They continued to appear during the following two months. Although this lesion usually occurred in the area where the methylcholanthrene was applied, several of the ducks developed hemangiomas on the feet. This was attributed to their scratching the moistened area beneath the wing after the carcinogenic agent was applied. The hemangiomas varied widely in size. Some were only 2 to 3 cm., while the largest observed was 5 cm. Bleeding was frequent from the larger hemangiomas. These bleeding tumors sometimes became infected and showed extensive

FIG. 4

(A) Duck 411. Squamous cell carcinoma in skin 79 days following the first application of methylcholanthrene (biopsy, *Fig. 4* C).

(B) Duck 411. The tumor regressed and was absent 53 days following the time of the biopsy.

(C) Duck 411. The underlying stroma is infiltrated with squamous epithelial cells. There has occurred considerable necrosis of these cells.

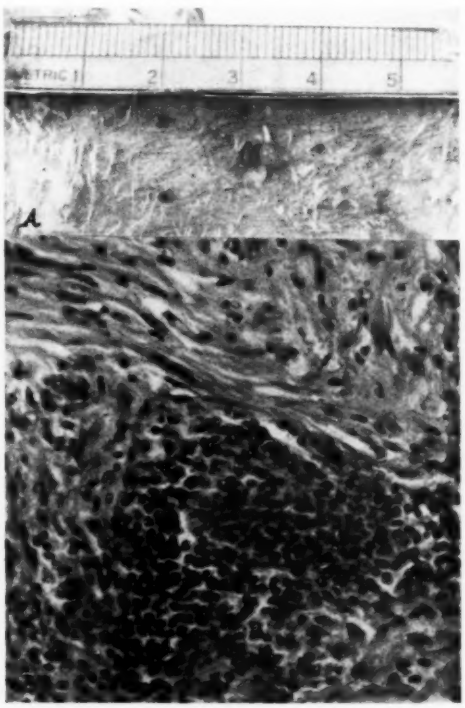


FIG. 5

(A) Duck 416. Fibroma arising from a feather follicle four months after first application of methylcholanthrene.

(B) Duck 265. Fibroma six months following the first application of methylcholanthrene. Note the large group of lymphocyte-like cells within the tumor (H & E stain, x 361).

necrosis. Two ducks (516 and 375) with large bleeding hemangiomas died. At autopsy no metastases were found. No cause for death was found other than infection or loss of blood.

The histological pattern varied in the hemangiomas. Sometimes the vascular sinuses were very small and in other areas they were cystic. Thrombosed channels were frequent in some tumors. Many of these hemangiomas showed large groups of lymphocyte-like cells similar to those described in the fibromas. Also it appeared that the older hemangiomas showed more of these cells than the younger. Some tumors appeared microscopically to be typical hemangiomas and after partially regressing they were excised and histologically showed principally lymphocytes. This phenomenon is nicely illustrated in duck 147 *(Fig. 6-A)*. On the 168th day following the first application of methylcholanthrene to the skin, two tumors were present on the wing *(Fig. 6-A)*. One of these (tumor *a*) continued to regress and was completely absent on the 180th day. On the 182nd experimental day tumor *b* *(Fig. 6-B)* was excised. No recurrence occurred and the duck was sacrificed on the 276th day. No metastases were found. *Figure 6-C* shows the histologic characteristics of tumor *b*. The angiomatous pattern apparently had been replaced by lymphocyte-like cells. This has been a frequent microscopic finding in these hemangiomas, especially in the older tumors.

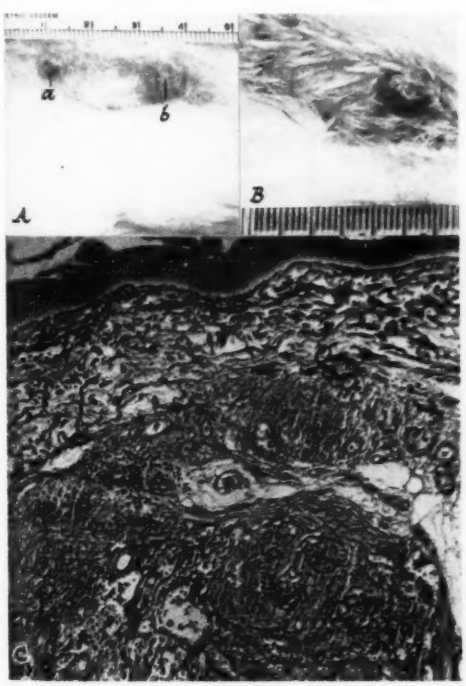


FIG. 6

(A) Duck 147. Two tumors, *a* and *b*, are present on the wing 168 days following the local application of methylcholanthrene.

(B) Duck 147. The small tumor, *a*, had completely regressed by the one hundred and eighty-second day. Bird sacrificed on the two hundred and seventh-sixth day. No tumor was present.

(C) Duck 147. Tumor *b* removed on the one hundred and eighty-second day. There is a large amount of reticulum in the area of the tumor and many lymphocyte-like cells. There are few blood channels in the tumor at this time (Wilder's reticulum stain, x 84).

Duck 421 had a tumor that we have classified only as a sarcoma. This lesion was first observed on the ninety-fourth day following the first application of methylcholanthrene to the wing. On the 128th day tumor A measured 1.5 x 1.5 x 1.2 cm. It was bluish-brown in color and moderately firm in consistency. On the 142nd day tumor A measured 1.8 x 1.5 cm. and the color and consistency were the same as previously described. At that time tumor *b* was present in an adjacent area of the skin *(Fig. 7-A)*. It measured 3 mm. and was identical in macroscopic appearance to tumor *a*. Tumor *a* was excised on the 177th experimental day *(Fig. 7-B)*. Tumor *b* continued to increase in size until the 256th experimental day, at which time it was relatively soft and resembled a scar more than a hemangioma. This lesion remained stationary in size and appearance until the 341st day *(Fig. 7-C)*, at which time the lesion was removed for histological study. It was composed of spindle-shaped cells that were more or less uniform in size and shape. These cells infiltrated the adjacent stroma *(Fig. 7-D)*. Many groups of lymphocyte-like cells and eosinophils were present within the neoplasm. In one area there was some calcification surrounded by fibrous stroma and collections of myeloid cells. Of course, one could not prove that the two neoplasms in duck 421 were the same; however, in my opinion they were macroscopically similar. Whether tumor *a* should be considered as an ayptical malignant hemangioma or only as a sarcoma may be a matter of opinion. There is no doubt, however, that the lesion is a neoplasm and that it spontaneously regressed.

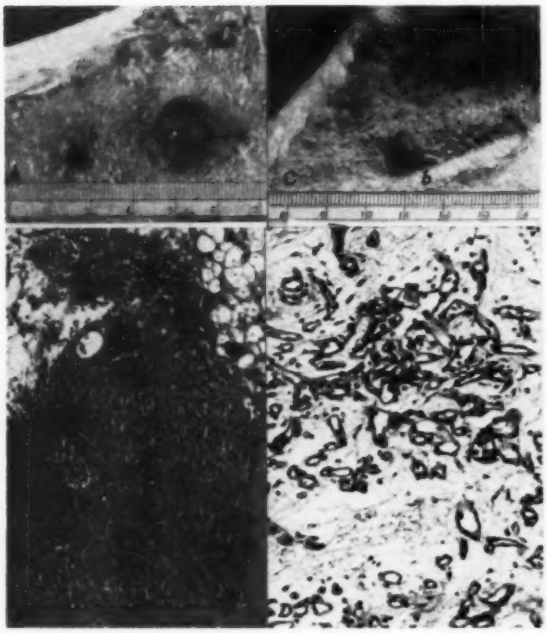


FIG. 7

(A) Duck 421. Tumor *a* (1.8 x 1.5 cm.) and tumor *b* (3 mm.) on the one hundred and forty-second day following the local application of methylcholanthrene.

(B) Duck 421. Tumor *a* removed on one hundred and seventy-seventh day. The tumor is composed of spindle-shaped cells that infiltrate the surrounding tissue. Groups of lymphocytes and eosinophils are present. This is considered a sarcoma (H & E stain, x 84).

(C) Duck 421. Tumor *b* measured 1.5 x 1.2 cm. on the two hundred and fifty-sixth day and regressed to 1.0 cm. on the three hundred and tenth day. It remained stationary in size until the three hundred and forty-first day at which time it was removed.

(D) Duck 421. Tumor *b* is composed of many capillaries with loose fibrous stroma separating these channels (H & E stain, x 150).

DISCUSSION

Knowledge of the mechanism by which spontaneous regression occurs ultimately may be of clinical value in the treatment of neoplasms. This phenomenon has been observed so infrequently, however, that little has been published referable to it. The hypersensitive type of reaction that preceded the regression of the uterine myosarcoma reported by Stewart[6] is quite interesting; however, no other similar cases are known to have occurred. Rohdenburg[2] was impressed by the occurrence of high fevers in cases where spontaneous regression occurred. Regression of breast tumors following castration would indicate a hormonal mechanism. This regression may be the result of some process occurring within the local tumor cells.

In the duck the regression of neoplasms seems to be accompanied by two processes: first, an infiltration of lymphocyte-like cells within the tumor, and secondly, the occlusion of vascular channels by these cells. The question immediately arises as to cause and effect. It would appear from our studies that these lymphocyte-like cells are more numerous in older tumors. Furthermore, the infiltration of the vessel walls by this cell would at least lend support to the idea that the process of regression is the result of reticuloendothelial activity within the tumor. Associated with this local accumulation of lymphocytes in the vessel wall is vascular obstruction, which of course would be reflected as ischemia of the tumor tissue. All neoplasms in the duck have not shown this lymphocytic infiltration; however, it has been conspicuous in some of the fibromas and a majority of the hemangiomas. Necrosis was very noticeable in some of the regressing squamous cell carcinomas.

We are not surprised to find a spontaneous regression of papillomas in these ducks since it is a frequent process in man. Also the regression of the fibromas arising from the feather follicles may be explained on the basis of blood supply. The spontaneous regression in the hemangiomas presents an entirely different problem. Thrombosis does occur; however, in my opinion, this cannot explain the regression. The progressive increase in the number of reticuloendothelial cells appearing within the tumors as they age would suggest a mechanism related to the reticuloendothelial system. The cellular necrosis characteristic in the regress-squamous cell carcinomas may be related to some immunological type of reaction.

Clinical and experimental observations have shown that benign and malignant neoplasms may spontaneously regress. The mechanism by which this occurs is not known. The data would suggest some immunological phenomena. The problem certainly deserves further experimental study.

SUMMARY

Spontaneous regression does occur in neoplasms in both man and experimental an-

imals. The mechanism by which this process occurs is unknown; however, reference is made to some of the discussions in the literature referable to the problem.

Spontaneous regression is a frequent occurrence in squamous cell carcinomas, hemangiomas and fibromas that occur in the skin of white Pekin ducks following the local application of methylcholanthrene. The histological features of these tumors and the changes that may accompany the process of regression have been briefly described.

REFERENCES

1. Eck, Hermann von: Uber Spontanheilung bösartiger Geschwülste, besonders des malignen Hodenteratoms (Abstract). J.A.M.A., **151**:958, 1953.
2. Rohdenburg, G. L.: Fluctuations in the Growth Energy of Malignant Tumors in Man, with Especial Reference to Spontaneous Recession. J. Cancer Research, **3**:193-225, 1918.
3. Touraine, A.; and Duperrat, R.: La Guérison: Spontanée du Cancer. Presse Medicale, **46**:57-60, 1938.
4. Park, W. Wallace; and Lees, James C.: Choriocarcinoma. Arch. Path., **49**:73-104 and 205-241, 1950.
5. Bartley, Osborne; and Hultquist, Gösta T.: Spontaneous Regression of Hypernephromas. Acta. Path. Microbiol. Scandinavica, **27**:448-460, 1950.
6. Stewart, Fred W.: Experiences in Spontaneous Regression of Neoplastic Disease in Man. Texas Rep. Biol. and Med., **10**:239-253, 1952.
7. Woglom, Wm. H.: The Regression of Spontaneous Mammary Carcinoma in the Mouse. J. Cancer Research, **7**:379-394, 1922.
8. Murray, J. A.: Spontaneous Cancer in the Mouse; Histology, Metastasis, Transplantability, and the Relations of Malignant New Growths to Spontaneously Affected Animals. Third Scientific Report of Imperial Cancer Research Fund, 69, London, 1908.
9. Beck, Stephan: Spontaneous Regression of Histologically Malignant Tumors Induced in Rabbits by 9:10-Dimethyl-1:2-Benzanthracene. Nature, **156**:238, 1945.
10. Black, Maurice M.; Kerpe, Stase; and Speer, Francis: Lymph Node Structure in Patients with Cancer of the Breast. Amer. J. Path., **39**:505-521, 1953.
11. Haaland, M.: Spontaneous Tumors in Mice. Fourth Scientific Report of Imperial Cancer Research Fund, I, London, 1911.
12. Pollard, Morris; and Bussell, Robert: Role of the Spleen in Resistance to Epithelial Tumors. Texas Reports Biol. and Med., **11**:58, 1953.
13. Pollard, Morris; and Bussell, Robert H.: An Antineoplastic Factor in Spleens of Mice Previously Inoculated with Methylcholanthrene. Proc. Soc. Exp. Biol. and Med., **83**: 671, 1953.
14. Huggins, Charles: Endocrine Substances in the Treatment of Cancers. J.A.M.A., **141**:750-754, 1949.
15. Beatson, George T.: Treatment of Inoperable Cancer. Brit. Med. J., **1**:1386, 1896.
16. Lett, Hugh: An Analysis of 99 Cases of Inoperable Carcinoma of the Breast Treated by Oöphorectomy. Lancet, **1**:227-228, 1905.
17. Rigdon, R. H.: Tumors Produced by Methylcholanthrene in the Duck. Arch. Path., **54**:469-377, 1952.
18. Rigdon, R. H.: Fibroma Arising from Feather Follicles of Ducks Following Local Application of Methylcholanthrene to Skin. Proc. Soc. Exp. Biol. and Med., **83**:34, 1953.

DISCUSSION *(Abstract)*

Dr. Bela Halpert, Houston, Tex.—I should like to ask what the relationship was between the site of occurrence of the neoplasm and the site of application of the substance that induced its growth. What happened to the ducks that had squamous cell carcinoma and those that had a fibrosarcoma or sarcoma? Have there been any which died from the disease or does the lesion remain localized and disappear later?

Dr. McKenzie P. Moore, Jr., Charleston, S. C.—It was not clear to me, whether the size of the lesion or the length of time it had been present had anything to do with either its progression or regression.

Dr. Rigdon (closing).—The problem of where these tumors are situated with regard to the application of methylcholanthrene: we drop it on the skin beneath the wing and it spreads to the adjacent area. The tumors usually develop in the areas thus treated. Some of the ducks are prone to put their head under their wing. A few tumors have developed on the eye and bill because of this. Some scratch themselves and tumors may develop on the feet. Ducks develop a lesion only on a part of their body that comes into contact with the carcinogenic agent.

These tumors develop after we stop applying methylcholanthrene. They may occur six months to a year after we stop applying it.

What happens to these tumors? We have biopsied several of the birds that had what we are calling squamous cell carcinoma. We found none of these tumors present at the time they were sacrificed. The lesions had completely healed.

The small hemangiomas are more likely to regress spontaneously, but some may reach 2.5 cm. and then regress. When they become 3 or 5 cm. in diameter frequently they do not regress.

Coming back to Dr. Halpert's question concerning the fibrosarcoma which I showed you, there were two tumors which were macroscopically alike in one bird. We removed one, which showed this sarcoma-like lesion. The other tumor that looked exactly like it regressed spontaneously.

Dr. Halpert.—In other words, these were all local lesions?

Dr. Rigdon.—There was no evidence of metastasis. We killed some of those birds five or six months after the tumor was removed and found no evidence of metastasis.

Dr. Halpert.—Under those circumstances I wonder whether you are justified in calling it a carcinoma or a sarcoma.

Dr. Rigdon.—All who saw these tumors said they would have to call the lesion a squamous cell carcinoma from a histological standpoint. If you wish to be a Puritan and say that you cannot diagnose a malignant tumor until it metastasizes, then in the practice of pathology we are going to have to be a little cautious, because we try to get them out before they metastasize.

Histologically, this is a squamous cell carcinoma, according to my interpretation and everybody else's who has seen it.

The important thing we must remember is that these are different hosts from those which we generally use for the production of tumors. We may have different criteria for malignancy in the duck, the rat and man. We cannot say that the duck has to act exactly like a human. This may be a cancer in the duck and not act like a cancer in the human. If the definition is that you have a malignant tumor only

when it metastasizes, this does not fulfill that requirement.

Dr. Halpert.—I only asked whether you made the diagnosis on a morphologic basis in the site where the growth occurred.

Dr. Rigdon.—The answer is "yes."

THE LARYNX AND PHARYNX RADIOLOGICALLY CONSIDERED*

By R. P. O'Bannon, M.D.
and
Otto H. Grunow, M.D.
Fort Worth, Texas

From time to time papers have appeared describing the value of the lateral view of the soft tissues of the neck. The discussants in practically every instance have avowed a desire to extend investigations in this direction. Yet, the recent American literature, in contrast to the continental literature, contains few references to this method of examination.

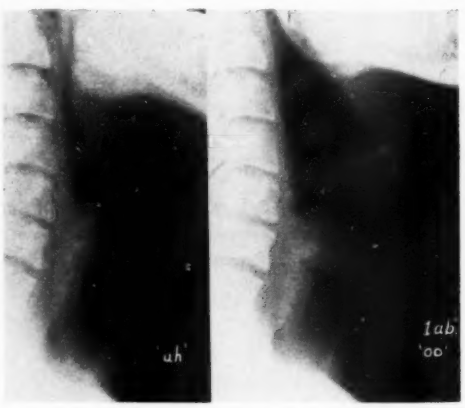
The purpose of this paper is to renew acquaintance with the radiological examination of the larynx and pharynx, by outlining their anatomy, by enumerating their morbid conditions, by reviewing the theories regarding the ossification of the larynx and by presenting changes which may occur in the laryngeal cartilages relative to age and sex.

The examination requires no additional equipment, no preparation or unusual and uncomfortable procedures for the patient. Films are preferably taken in the sitting position at a distance of six feet. The technic is the same as for the usual cervical spine except that the time is halved or the voltage is dropped 12 kilovolts.

The patient is instructed to vocalize a vowel during the exposure. The purpose is to shape the vocal cords into a characteristic pattern which is easy to identify. Phonation allows for fixation of the false and true cords. The ventricles which lie between them are distended by the increased air pressure and supply contrast at the site.

It is felt by many that the vowel "ee" produces the desired effect. Pancoast, Pendergrass and Shaeffer[1] suggest the vowel "a," probably "ah" rather than the long "a." Out of curiosity we examined several larynges during the pronunciation of the various vowels. The sounding of "ee" produced a narrow ventricular shadow which was not changed when the same sound was sung an octave higher. The air column of the oro- and hypopharynx had a good width. Although it is felt that phonation of the vowel "ah" opens the mouth it constricts the retrolingual air space. The base of the tongue approaches the back of the throat closely and produces an air column narrow in the antero-posterior dimension. The vowel "oo" gave the best results (*Fig. 1*). The entire pharynx appears more relaxed so that the limits of relaxation and recession of various anatomical parts from the opposing walls are clearly demonstrated. The vallecula is broader, the laryngeal ventricle has a greater height and is easier to outline.

To aid the demonstration of the various anatomical parts the Valsalva maneuver has been recommended. The air column is cut off by the back of the tongue and possibly the epiglottis, which press against the back of the pharynx. The retrolingual area is thus compressed and the laryngeal structures and the hyoid bone are lifted upward. Air is forced into the pyriform sinuses and outlines more clearly the retrolaryngeal structures. The distortion of the retrolingular and oropharyngeal structures may be reduced and the anatomy brought into a more physiological posi-



A B

Fig. 1

Vocalization of "oo" during exposure produces greater separation of anatomical structures.

*Read in Section on Radiology, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

tion by increasing the intrathoracic pressure against the pinched nose and closed mouth.

Radiographic Anatomy.—The oropharynx and laryngo-hypopharynx are particularly well suited for study by fluoroscopy and radiography. Contrasts produced by air, the soft tissues with their fascial planes and the cervical spine clearly outline the important anatomical structures. Several important lines should be followed routinely, both to cover the area completely and to gain familiarity with the structures *(Fig. 2)*.

The first major line begins with the tongue. It forms, for the most part, the anterior margin of the air column. It is a smooth curve which swings downward and forward to reach a small fossa, the vallecula. From here it rises to the tip of the epiglottis. Two minor lines now descend from the tip. The more anterior one continues to form the anterior margin of the air column through the larynx. It descends to two transversely placed soft tissue bands separated by a cigar or zeppelin shaped air space, the laryngeal ventricle. The upper soft tissue band represents the composite of the false cords; the lower, the composite of the true cords. Below, it continues as the anterior margin of the tracheal air column. The second minor line arises from the tip of the epiglottis, descends directly to the posterior portion of the larynx and forms the aryepiglottic fold. Its inferior end, therefore, would indicate roughly the apical portion of the arytenoid cartilages. The continuity of the line is lost as it passes through the vocal region but below the glottis it forms the posterior margin of the tracheal column of air. The second major line arises from the nasopharynx, proceeds directly downward to the level of the upper margin of the thyroid cartilage and then forward to become fused with the aryepiglottic fold.

Besides the air spaces outlined above we have two important spaces whose width should be particularly noted. The first is the retropharyngeal space which varies in the adult from 3 to 5 mm. in thickness. The second is the retrotracheal space which varies in the adult from 10 to 15 mm. in thickness. Hay[2] describes these thicknesses as a function

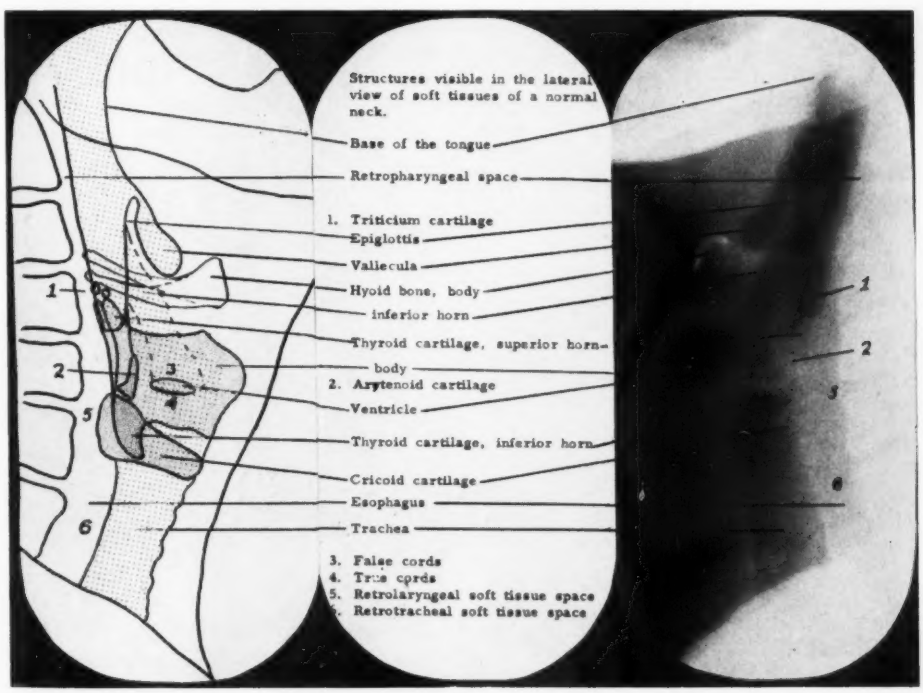


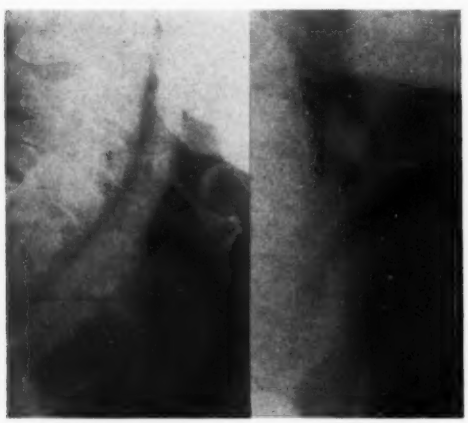
FIG. 2

Normal anatomy of the pharynx and larynx. Comparison of a line drawing and a radiograph.

of the width of the fourth cervical body, saying that the retropharyngeal soft tissue thickness is ordinarily 0.3 times the width of the body of C4 and that the retrolaryngeal space at the level of the cricoid cartilage is 0.7 in the male and 0.6 times in the female the width of C4. He included in his chart the relative thickness seen in normal infants and children.

Morbid Anatomy.—Morbid anatomy is not discovered without knowledge of the normal. A study of several examples of the cervical soft tissues in the lateral position will ingrain the normal characteristics in the mind. Disease processes consist chiefly of disturbance of contour. Inflammatory processes *(Fig. 3)* on the one hand are diffuse and tend to thicken and widen spaces and to cover relatively large areas. Their borders are often poorly defined. Within the involved areas there may be gas in the form of emphysema, secondary to trauma of examination or treatment or to a gas producing organism. Abscess may be suspected by the clinical course and localized swelling. A draining abscess might show an air pocket or a fluid level.

Tuberculosis is characterized by an obliteration of the ventricle and swelling of the arytenoid area and the aryepiglottic fold. Upward progress of the infection may obliterate the vallecula. Tertiary syphilis less frequently seen these days may produce similar changes. Diphtheritic and streptococcic infections can produce detectable changes in the air column.



A B

FIG. 3

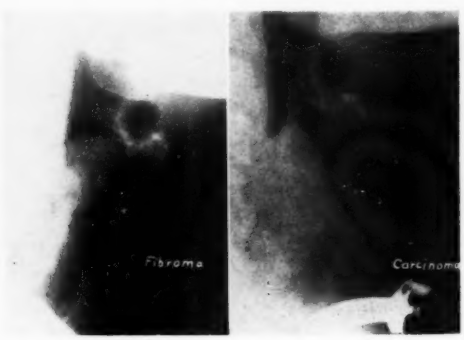
(A) Retropharyngeal abscess with emphysema. (B) Tuberculosis of pharynx and larynx.

Involvement of the retropharyngeal and retrotracheal spaces by infection produces the characteristic widening of the structures. These findings have been emphasized by various authors such as Iglauer,[3] O'Bannon[4] and Pancoast, Pendergrass and Shaeffer.[1]

Tumors *(Fig. 4)*, on the other hand, are more discrete and appear as masses which locally encroach upon spaces, displace normal structures or occupy portions of the air column. The benign tumors typically are discrete and well localized. Malignant tumors may be exophytic or invasive and display the characteristics of their type. Infiltration by a malignant tumor may be further revealed by erosion, absorption, or fracture of the more solid structures such as the hyoid bone and the ossified cartilages of the larynx. Should ulceration and infection occur the primary characteristics will be modified by those of infection.

The benign tumors which might be kept in mind are the fibromas, hygromas, thyroglossal duct and other cysts. The more common malignant type is the epidermoid carcinoma which appears with a fair degree of differentiation in the larynx proper but with less differentiation in the neighboring structures. Rarely there is discovered a sarcoma, adenocarcinoma, Hodgkin's disease or lymphoma.

To be complete, one should also cite such diseases as esophageal diverticula, disturbances of innervation and foreign bodies. Paralyses of the vocal cords and disturbed innervation for the swallowing act may be studied quite satisfactorily by fluoroscopy.



A B

FIG. 4

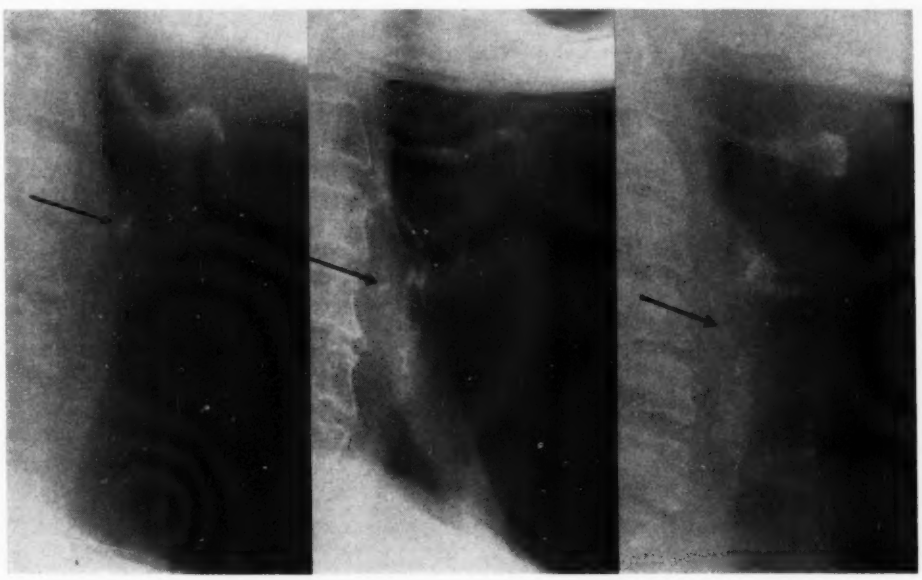
(A) Fibroma. Extent and origin unsuspected by direct and indirect laryngoscopy. (B) Carcinoma of the larynx. Degree of extension clearly shown.

Foreign bodies, particularly fish and chicken bones frequently lodge in the area. The lateral view of the cervical soft tissues thus becomes an essential part of the search for the offender. Several pitfalls must be kept in mind *(Fig. 5)*. The first is the calcification of the arytenoids in women. The density of the cartilage is often striking and has given rise on numerous occasions to a false diagnosis. The second pitfall is the localized calcification of the superior posterior tip of the cricoid cartilage. This focus of calcium is often isolated, lies over the esophageal shadow and simulates a foreign body. The third pitfall is the isolated vertical calcification of the posterior margin of the body of the cricoid cartilage. Lying over the retrotracheal soft tissues it uncannily simulates the appearance of a fish bone.

Roentgenography, therefore, plays an important part in determining the diagnosis and the degree and limitations of the involvement. Although the described lateral view is ideal, still, the area should never be neglected whether the film happens to be a skull, the mandible, the cervical spine, the facial bones or the like since occasionally an unsuspected lesion may be uncovered.

Calcification and Ossification of the Larynx.—The processes of calcification and ossification which occur in the laryngeal cartilages during growth and maturity have held the interest of a number of students because the series of events noted during the development of skeletal bone is not reflected during the ossification of the laryngeal cartilages. The latter appears to begin at a time when the development of skeletal bone has reached a relative state of maturity.

Histologically, ossification occurs only in the hyaline variety of cartilage which is found in the cricoid, the thyroid and the greater portion of the arytenoid cartilages. The cuneiform, corniculate, triticeal, epiglottic and vocal processes of the arytenoid cartilages are composed of yellow fibrocartilage and rarely show evidence of ossification. At times an exception is noted in that the triticeal cartilage will display a dense form of ossification. Chamberlain *et alii* have pointed out that the presence of calcium in the laryngeal cartilages represents true ossification and they suggest



A B C

FIG. 5

Normal ossifications in the (A) arytenoids, (B) superior posterior tip of cricoid and (C) posterior margin of cricoid which at times have been mistaken for foreign bodies.

that the term calcification is incorrect. The proof cited was drawn from adult larynges. It would be interesting to know whether the processes of ossification were preceded by calcification as is noted in certain lymph nodes and some degenerative processes.

According to Ciurlo and Olivera[6] as well as Chamberlain and Young,[5] Chievitz[7] in 1882 presented a study of 270 anatomical specimens, Scheier[8] in 1902 presented 120 cases, Ceresole[9] in 1920 reported on 3,708 larynges and Baclesse[10] in 1938 reported on 2,000 larynges. From this mass of material there has evolved a schematic plan of ossification which is quite interesting. An attempt has been made to use the information for the purpose of determining the age and sex of the individual. To our knowledge this has not been very successful.

Five foci of bone formation are found in the thyroid cartilage according to Ciurlo and Olivera. The first two are universally accepted and the last three are proposed by Baclesse. Point one lies in the posterior lateral edge of the thyroid cartilage near the inferior horn. From this point the ossification proceeds upward, anteriorly and inferiorly. The second point lies in the anterior margin. The third focus is in the superior horn. The fourth lies at the union of the anterior third with the middle third of the lamina. The last lies on the upper margin.

The process of ossification is said to begin at these various foci consecutively as the individual grows older. There finally remain two windows in the lamina and even these may ossify and be obliterated. The process is said to begin at the age of 20-25 in the male and 25-30 in the female. The cricoid is said to calcify somewhat later and has an anterior and a posterior focus.

CORRELATION OF THE AUTHORS' SERIES WITH THE LITERATURE

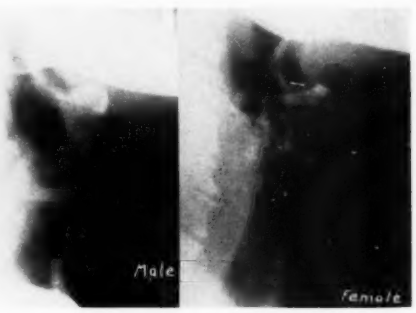
We have had the privilege of studying a series of 47 cervical soft tissue radiographs made from ostensibly normal persons who ranged from 18 to 90 years of age. Among the group there were 20 males and 27 females. Several of the cases we were able to follow for a period of twenty-two years.

Our series is small in comparison with those published by Baclesse[10] and Ceresole.[9] We tried to align our findings with those published but had difficulty in doing so. We were unable to demonstrate a definite sequence in the appearance of the ossification centers in the thyroid cartilages. Although a good proportion of our patients were in the 60-90 age bracket we nevertheless could demonstrate complete ossification only rarely. Male and female differences were frequently quite marked.

Thyroid Cartilage.—The thyroid cartilage of all males and females exhibited ossification in the the posterior portion. This extended into the superior and inferior horns in practically all instances except in the males where the process was found in only 75 per cent of the time in the superior horn. The anterior portion of the thyroid contained evidence of calcification in 40 per cent of both sexes and was not limited to the older age group. Two well defined windows were seen in five males. A similar pattern could not be demonstrated in the females.

The structure of the bone varied in the two sexes *(Fig. 6)*. The male, for the most part, displayed a homogeneous, fine texture. The female bone structure was usually coarse and was characterized by a network of bone which was irregular and displayed irregular arches.

Arytenoid Cartilage.—The third cartilages of importance are the arytenoids whose ossification shows a very definite sexual variation. In the male their shadow cannot be isolated from those of the surrounding thyroid cartilage. In the female the arytenoids are clearly identified in nine-tenths of the larynges. Moreover, of these almost two-thirds



A B

FIG. 6

Differences in the texture of the ossification between males and females.

displayed an unusually dense variety of ossification *(Fig. 7)*. The shape is typically triangular and ossification seems to involve the posterior portion and apex. Most authors claim that the vocal processes do not ossify since they are formed of yellow fibrocartilage; yet on several occasions the calcific shadows seemed unusually complete.

Triticeal, Corniculate, Cuneiform Cartilages and the Epiglottis.—The triticeal cartilages are small rounded structures lying between the superior horns of the thyroid and the major horns of the hyoid bone. At times they may be absent. Although thought to be primarily of non-ossifying yellow fibrocartilage, ossification does occur in them and was seen in one-seventh of the men. In the women the process occurred in over one-half of the cases and of this group one-tenth displayed the unusually dense form of ossification. The remaining small cartilages could not be recognized on the film. The epiglottis contained calcium only once in the series.

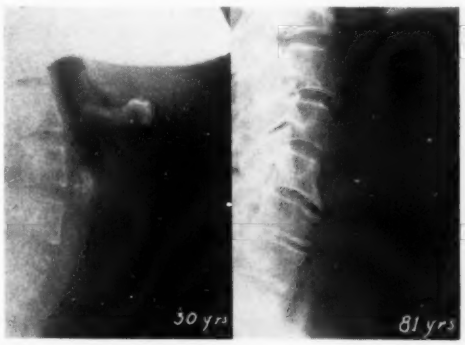
FIG. 7

Commonly encountered very dense ossification in the arytenoids in the female.

DISCUSSION

The schematic diagrams purporting to illustrate the appearance and progress of laryngeal ossification of Baclesse[10] as published in Ciurlo and Olivera's article failed to fit our series.

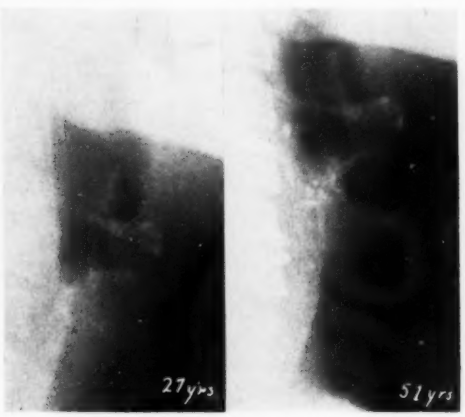
In the male larynges no orderly progression of ossification could be followed. In one 24-year-old, the larynx was almost completely ossified except for the anterior and middle windows of the thyroid cartilage. In contrast, a 25-year-old had practically no calcification and looked exactly like an 18-year-old. An 81-year-old looked like a 30-year-old *(Fig. 8)*, a



A B

FIG. 8

Degree of ossification is not dependent on age. Here the extent of ossification is greater in a 30-year-old than in an 81-year-old female.



A B

FIG. 9

Little change in the extent of ossification in the larynx during a 24-year period in the same male.

90-year-old was not different from a 45-year-old and a 55-year-old could not be differentiated from a 25-year-old.

Likewise, in females a small degree of ossification was found in a 90-year-old whose larynx compared with a 29-year-old. A 70-year-old had only a few flecks of calcium.

Of interest were the several larynges we were able to follow for a period of 24 years *(Fig. 9)*. For the most part the pattern of ossification present at the initial examination did not change except for a minor accretion of bone.

In view of the great variability of our findings and the lack of important change over a period of years in the same individual we should like to suggest the possibility of an individually inherited laryngeal ossification pattern which may be modified by sex or unusual illnesses. The pattern is first laid down in the early twenties and is modified only slightly in the ensuing years although a somewhat greater deposit of bone may ensue. Such a theory would easily cover our experiences.

SUMMARY

These are the thoughts we should like to leave with you:

(1) The radiographic examination of the soft tissues of the neck is simply done and may give great returns. The differences between the densities of bone, air and soft tissues allow for a detailed study of their anatomy.

(2) Morbid anatomy consists primarily of changes in the outline or thickness of existing structures brought about by swelling, infiltration, destruction or by the presence of foreign bodies. Normal ossification centers which have been mistaken for foreign bodies include the arytenoids in females, the isolated superior posterior tip of the cricoid and the isolated ossified anterior margin of the cricoid.

(3) Ossification of the laryngeal cartilages is a normal process which follows a definite pattern. It begins in the early twenties and is completed in the ensuing years. The final degree of ossification appears to be dependent upon the individual's inherited pattern.

(4) Sexual differences in laryngeal ossification may be quite marked. The texture for the most part in the female is coarser than in the male. In the female the arytenoids are readily distinguished and frequently unusually dense. The triticeal cartilages similarly are clearly seen in one-half of the females and frequently are unusually dense. A slight preponderance of ossification in the posterior portion of the cricoid cartilage is seen in males.

REFERENCES

1. Pancoast, Henry L.; Pendergrass, Eugene P.; and Shaeffer, J.: The Head and Neck in Roentgen Diagnosis, p. 779. Springfield, Ill.; Charles C. Thomas, Publisher, 1940.
2. Hay, P. H.: The Neck. Ann. Roentgenology, Vol. 9. New York: Paul B. Hoeber, Inc., 1930.
3. Iglauer, Samuel: Value of Roentgenography in Diagnosis of Diseases of Larynx and Trachea. J.A.M.A., **63**:1827-1831 (Nov. 21) 1914.
4. O'Bannon, R. P.: Roentgenography of the Larynx and Pharynx. Sou. Med. J., **29**:154-158 (Feb.) 1936.
5. Chamberlain, W. Edward: and Young, Barton R.: Ossification (So-called "Calcification") of Normal Laryngeal Cartilages Mistaken for Foreign Body. Amer. J., Roentgenol. and Rad. Ther., **33**:441-450 (April) 1935.
6. Ciurlo, L.; and Olivera, A.: L'indagine radiologica della larynge. Inform Med. (Genova) **5**:2, 43-47, 1951.
7. Chievitz, J. H.: Untersuchungen uber die Verknocherung der menschlichen Kehlknorpel. Arch. f. Anat. u. Entwcklngsgesch., 1882. Cited by Ciurlo and Olivera (6) and Chamberlain and Young (5).
8. Scheier, M.: Ueber die Ossification des Kehlkopfes. Arch. f. mikro Anat., **59**:220, 1902. Cited by Ciurlo and Olivera (6) and Chamberlain and Young (5).
9. Ceresole: Arch. Ital. di Oto-Rinol. e Laringologia, Vol. 31, 1920. Cited by Ciurlo and Olivera (6).
10. Baclesse, F.: Le diagnostic radiologique des tumeurs malignes du pharynx et du larynx. Paris: Masson et C. Editeurs, 1938. Cited by Ciurlo and Olivera (6).

650 Fifth Avenue

DISCUSSION *(Abstract)*

Dr. William Wright Bryan, Atlanta, Ga.—Recently we have obtained a 0.1 mm. focal-spot x-ray tube to do some elephantine-type radiographs to see how much detail we can actually see in and around the larynx.

We have made films with an idea of trying to show a disturbance of the zeppelin or cigar-shaped opening between the two vocal bands on phonation. I had the high E sound made for one film and for the other film merely tried to keep the patient's mouth open, breathing in order to keep the cords abducted.

We have been rather interested recently in trying to determine the amount of space and ability of the pharynx to expand in training individuals for pharyngeal or esophageal voice. We have arrived at an idea of the expansibility of the pharynx and the upper end of the esophagus by partially outlining those structures with radiopaque material.

The textbooks tell me that a wavy defect which I sometimes see along the anterior margin of the barium filled esophagus is caused by extrinsic pressure from the signet of the cricoid cartilage. This defect is seen in patients frequently complaining of a burning sensation and some dysphagia or inability to pass the bolus of food from the lower pharynx into the esophagus. We have occasionally found it. The defect is seen on a partially oblique and on a lateral film and it actually passes around the margins of the esophagus

on its anterior surface but does not surround the esophageal lumen. The textbooks say that it is due to impingement of the posterior margin of the cricoid cartilage upon the anterior margin of the esophagus but I believe that it actually extends more caudad in its position than the anatomical position of the cricoid cartilage, particularly on swallowing, when the larynx and the cricoid are raised high beneath the hyoid bone.

Dr. O'Bannon (closing).—Defects in the uppermost portion of the esophagus and the hypopharynx, as revealed from barium studies of that region, have been subject to a great deal of error; most of them have been wrong more often perhaps than they have been right. In other words, it is very difficult to be precise in barium studies.

EXTREME EOSINOPHILIA IN CHILDHOOD*

REPORT OF CASES

By M. Hines Roberts, M.D.†
Atlanta, Georgia

Extreme eosinophilia, occurring in patients suffering with respiratory and gastrointestinal symptoms, accompanied by a persistent, febrile reaction, has frequently been reported. The etiology has been obscure, the classification therefore puzzling. Certain of these cases have apparently fulfilled the criteria of the so-called Loeffler's syndrome,[1] first described in 1932; others have seemed more closely allied to "tropical eosinophilia" often described in the Indian and the British medical literature.

During the past few years important contributions to the literature have been made which quite clearly indicate the etiological agent concerned in many of the cases under discussion.

In 1947 Perlingiero and Gyorgy[2] reported their case of a two-year-old negro boy suffering with cough, vomiting, fever and a large liver, accompanied by extreme eosinophilia. The lung changes were somewhat suggestive of Loeffler's syndrome. The blood showed a marked elevation in gamma globulin. Their important contribution concerned the biopsy of the liver, which revealed focal necrotic areas with numerous neutrophilic and eosinophilic leukocytes and many multinuclear giant cells. The child vomited a male ascaris and from that time on, was much improved. Their explanation was on the basis of allergic response to ascaris toxin.

Two years later, Zuelzer and Apt[3] in 1949 reported four cases of eosinophilia and hyperglobulinemia with similar clinical manifestations of varying degrees. Hepatic lesions resembling those described by Perlingiero and Gyorgy were found in one of the cases at autopsy, and in the other three by means of liver biopsy. No etiological agent was found. The pathology was explained on the basis of an allergic-hyperergic tissue response to an unknown antigen.

To Mercer, Lund, Bloomfield and Caldwell[4] goes the credit for first reporting the presence in the liver of larvae of Ascaris lumbricoides in a patient exhibiting the symptom complex under discussion. Histologically, two types of lesions were described; first, a purely exudative reaction, characterized by foci of inflammation consisting of eosinophils and plasma cells with a few phagocytes containing brown pigment, larvae were found in these lesions. Second, granulomatous areas were observed, consisting of deeply acidophilic fibrils with granular centers surrounded by a zone of polyhedral and fusiform cells. These cells were very large, with oval nuclei and eosinophilic cytoplasm. The keratin-like material observed in the granulomatous lesions was thought possibly to represent dead larvae.

In 1952, Beaver and associates[5] reported a similar case in which the liver biopsy revealed identical histological findings, with the presence of larvae, apparently of Toxocara canis. They suggested the term visceral larva migrans to include all those cases exhibiting the symptom complex described above caused by larval infestation of the liver or other viscera, regardless of the type of nematode producing the infestation.

Believing that the condition is more common than is realized and that we should be on the alert for its occurrence, the author considers it worthwhile to report two cases which probably may be classified as visceral larva migrans, although the actual larvae were not identified; and a third case of extreme eosinophilia, which cannot be readily diagnosed.

---

*Read in Section on Pediatrics, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

†Medical Director, Henrietta Egleston Hospital, Atlanta, Georgia.

Case 1.—S.R.W., a white boy, age 3 years, was admitted to Egleston Hospital on September 25, 1951 with the history of an acute febrile illness which began on August 19, about five weeks before admission. There was some abdominal discomfort at the onset which subsided after a day or two, at which time the parents noted a mass in the right lower quadrant. The family physician was seen three days after the onset of the illness. He found no evidence of peritonitis or obstruction, but confirmed the presence of a mass in the right lower quadrant, which measured about 4 by 3 cm. It was firm, moderately tender and seemed quite superficial. A blood examination at the time revealed a total white count of 65,000 with 68 per cent eosinophils. An x-ray of chest and abdomen showed no pathologic condition. A stool examination was negative for parasites, in spite of which finding the boy was treated for ascaris infestation on two occasions. Subsequently he seemed in good health, but abnormal findings in the blood persisted, and for this reason, he was admitted to the hospital for further study.

The family history was non-contributory. His past history was important only in the statement that he had always eaten dirt.

His physical examination on admission revealed a well developed and well nourished boy, age 3 years, apparently in good health. The tonsils were large but not inflamed. The heart and lungs were entirely negative except for moderate tachycardia. The abdomen revealed no masses or tenderness. The liver was palpated 4 cm. below the costal margin. It was smooth, firm and non-tender. The spleen was just felt under the left costal margin.

The important laboratory data are shown in *Chart 1*. The stool was negative for parasites on several occasions.

In view of the child's excellent physical condition and the fact that he was symptom free, a biopsy of the liver did not seem justified. He was discharged home with instructions to return at once should there be a recurrence of fever or abdominal symptoms. He is now five years of age and is in excellent health.

Although we have no definite proof, it seems quite likely that this child suffered with visceral larva migrans and the natural defenses of the body, in which the eosinophil obviously played an important role, finally eradicated the infestation. Histological studies suggesting the probable destruction of the larvae are brought out clearly in the reports of Mercer *et alii*, who were able to demonstrate active exudative lesions containing the larvae and other granulomatous areas in which no larvae were found, but in which it was logical to assume that their destruction had taken place. Such lesions were described by Zuelzer, and are similar to ones found by us in the next case to be reported.

Case 2, (Table 1).—R.L.S., a 19-month-old white boy was admitted to Egleston Hospital on July 20, 1953, because of an unexplained fever of three weeks' duration. The illness had begun with symptoms of a mild upper respiratory infection. The temperature at the onset was 104° F. and had persisted in spite of various antibiotics, usually reaching its height in the late afternoon. Except for restlessness and irritability the child was remarkably free of symptoms.

The family history and the child's past history were unimportant, except for the fact that later in the course of his stay in the hospital the grandmother remembered that when he visited her she often saw him eating dirt.

The physical examination revealed a remarkably well developed and well nourished, but rather pale child exhibiting no evidence of discomfort. In spite of his temperature, which fluctuated between normal in the early morning hours and 102° F. in the late afternoon, the child was playful, very active and ate quite well. He was rather constipated but stools were otherwise normal. The tonsils were enlarged but showed no evidence of infection. The heart and lungs were entirely normal. The abdomen was quite large and revealed a liver which extended 5 cm. below the costal margin. It was smooth, of normal consistency and non-tender. The tip of the spleen was palpated at the left costal margin. The examination otherwise was negative.

The blood examination revealed a striking eosinophilia. Serial blood counts are shown on the accompanying chart. The stools were negative for parasites. Blood cultures, agglutination tests and the heterophil antibody test, all proved negative. Kahn test was negative as was the tuberculin test.

A study of the bone marrow revealed granulocytic

BLOOD STUDIES

	WBC	Neut. Per Cent	Lymp. Per Cent	Eosin. Per Cent	Baso. Per Cent	Mono. Per Cent	Hgb. Gms.	RBC	Circ. Eosin.	Plate.
9-26-51	25,050	27	29	43	1		9.9	4,700,000		160,000
9-28-51									3,625	
10-8-51				ACTH, 12.5 mg., 9.6 h. (Begun)						
10-9-51									2,693	
10-10-51	10,350	29	16	54		1			1,240	
10-12-51	16,400	55	25	20						
10-13-51	10,900	75	16	8	1				625	
10-2-53	6,500	47	49	2	2		11.0	3,650,000		

TABLE 1

hyperplasia with most of the cells eosinophils. Maturation was normal with no marked shift to immature forms. No foreign or tumor cells were seen. On the basis of these findings it was felt that leukemia could be excluded as a possible diagnosis.

Since familial eosinophilia has been described, it was thought worthwhile to examine the blood of both parents. The total white blood counts were normal. The eosinophil count in each case was 3 per cent.

Believing that we were probably dealing with larval infestation of the liver, it was thought that a biopsy was indicated. Accordingly, a laparotomy was done by Dr. William Mitchell on the ninth day after admission. The findings were described by him as follows: "The liver is quite large. Numerous mottled grayish white areas are noted beneath the capsule. There is no coalescence of these areas. Minimal induration is present. The lesions are seen on both the inferior and superior surfaces of the liver. On cut surface the lesions extend into the substance of the liver. They vary in size from 2 to 7 mm. in diameter. A biopsy of the liver 2 by 3 cm. was taken from the right lobe."

Dr. W. H. Sheldon, pathologist at Emory University, made the following report on the biopsy submitted:

"Scattered throughout the liver are numerous foci of inflammatory cell infiltration which occasionally assume the form of granulomata. In some of these areas there is liver cell necrosis associated with a marked infiltration by eosinophilic polymorphonuclear leukocytes, some neutrophilic polymorphonuclear leukocytes and some mononuclear cells. In the other more granulomatous areas, in addition to numerous eosinophilic polymorphonuclear cells and lymphocytes, large mononuclear cells of epitheloid type and multinucleated giant cells are present. The latter are sometimes seen to surround some unidentifiable fragments of foreign material. Careful search was made for larvae, but none was found. In addition to the focal inflammatory cell infiltration, the sinusoidal spaces throughout the liver contain many scattered eosinophilic polymorphonuclear leucocytes. The diagnosis is eosinophilic granulomatous inflammation of the liver consistent with larva migrans infestation."

On July 23, the fourth day after admission, the patient was given a transfusion of 200 cc. of whole blood, and 1-diethyl-carbamyl-4 methylpiperazine dihydrogen citrate (hetrazan®) 120 mg. three times a day was begun.

The temperature persisted for seven days after hetrazan® was started and then rather abruptly returned to normal. The child was discharged from the hospital on August 1, 1953, thirteen days after his admission. He was last seen on September 18, at which time he was in excellent physical condition. The liver had receded, and was now just palpable at the costal margin. The hetrazan® was continued for a total of fifteen days.

Table 2 shows in detail the blood counts. It will be seen that as early as July 31, 1951, eight days after hetrazan® was begun, there was a tendency toward a normal blood count.

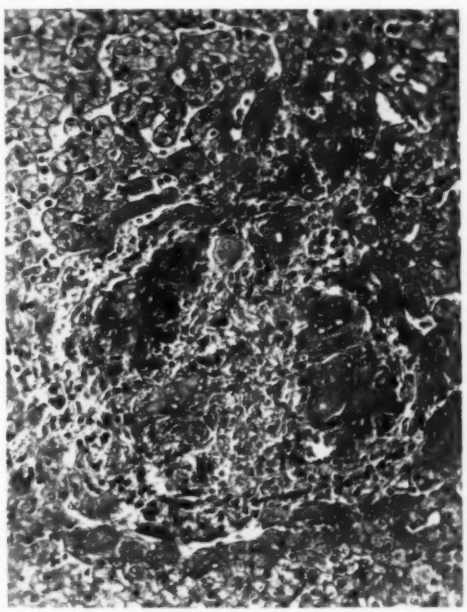


FIG. 1, CASE 2

Granuloma in liver with many foreign body type cells. The dark staining small cells at the periphery of the lesion are eosinophilic polymorphonuclear leukocytes.

BLOOD STUDIES

	WBC	Neut. Per Cent	Lymp. Per Cent	Eosin. Per Cent	Baso. Per Cent	Mono. Per Cent	Hgb. Gms.	RBC	Circ. Eosin.	Plate.
7-20-53	44,800	8	21	71			8	3,430,000		190,000
7-22-53	34,700	12	9	69					19,640	
7-22-53				Blood Transfusion 200 c.c.						
7-23-53				Hetrazan,® 120 mg. t.i.d. (Begun)						
7-25-53	31,900	15	11	74			10.1	4,290,000		
7-27-53	30,850	13	27	60			10.5	4,240,000		
7-31-53	24,650	37	29	34						
9-3-53	18,300	35	29	36			13.2	4,610,000		
9-18-53	22,900	34	19	45	1	1	11.0	5,000,000		

TABLE 2

Case 3 (Table 2)—H. W., a white boy, age 2½ years, became suddenly ill with fever 103.2° F. on February 16, 1951. Although no definite evidence of infection was found, he was given one injection of penicillin, followed by oral sulfa and penicillin. The temperature persisted as high as 103° F. each day. On February 23, it was noted that legs, feet and hands were swollen with purpuric spots on legs, feet and about the navel. He was given aureomycin for 5 days. The fever gradually subsided to normal by March 1, about 2 weeks after onset. On February 25, nine days after onset there was considerable pain in the left upper abdomen, accompanied by extreme lassitude. He had complained of this pain intermittently since that date.

The family history was non-contributory. Certain points in the past history of the child may be important. At the age of 17 months he had been treated locally for 10 days with penicillin for a stomatitis. When 27 months old he had passed an ascaris for which he was given hexylresorcinol (crystoids®). No more worms were passed.

The patient was first seen by me on March 1, 1951, two weeks from the date of onset. He was found in good physical condition except for a moderate pallor. His tonsils had been removed. A slight humming functional systolic murmur was heard over the precordia. The lungs were clear. The liver was felt 1 cm. below the costal margin; the spleen could not be palpated.

The laboratory data revealed a moderate anemia, with a striking eosinophilia. Blood studies for various agglutination tests, cultures, and the heterophil-antibody test were negative. The Kahn was negative as was the tuberculin test. Stool examinations on several occasions were negative for parasites. X-ray studies of the lungs suggested a peribronchitis, but no changes typical of Loeffler's syndrome.

Serial blood counts are shown in *Table 3*, for the period from February 24, 1951 to April 3, 1952. Since there had been a rapid fall in the eosinophil count from March 1951 to June 1951, it is possible that had blood counts been taken more regularly the eosinophil count would have been found to be normal several months earlier.

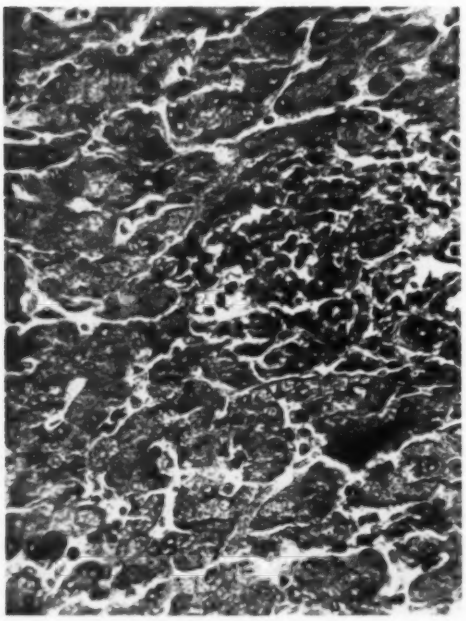


FIG. 2. CASE 3

A small lesion composed chiefly of eosinophilic polymorphonuclear leukocytes (small dark cells) in a portal space of the liver.

DISCUSSION

The function of the eosinophilic leukocyte remains obscure. Its spectacular response to certain stimuli is a constant challenge to the hematologist and the physiologist.

Data as to the behavior of this cell under normal and pathological conditions form the basis for certain theories regarding its role in health and disease. Experimental proof for the theories is lacking.

It has been noted that the cell is more abundant in the tissue fluids than in the blood itself. The epithelial linings of the respiratory and gastrointestinal tracts are

BLOOD STUDIES

	WBC	Neut. Per Cent	Lymp. Per Cent	Eosin. Per Cent	Baso. Per Cent	Mono. Per Cent	Hgb.	RBC	Sed. Rate
2-24-51	42,950	18	31	51			80%	4,150,000	
2-27-51	53,500	25	28	47			11.2 gms.	3,800,000	
3-2-51	41,350	12	33	54		1	10.5 gms.	3,390,000	45 mm./hour.
3-3-51	Therapy Begun: Pyribenzamine® 25 mg. t.i.d. FE. Sulph.								
3-7-51	35,500	2	30	67		1	9.5 gms.	3,130,000	
3-14-51	26,600	6	34	59		1	10.5 gms.	3,990,000	
3-27-51	15,050	24	41	33	1	1	11.5 gms.	4,520,000	
4-26-51	12,700	19	58	22		1	11.5 gms.	4,800,000	
6-26-51	6,850	18	70	12			12.5 gms.	4,800,000	
4-3-52	12,400	55	39	4		2	13 gms.	3,650,000	

TABLE 3

particularly abundant in eosinophils and for this reason an important role in detoxification has been attributed to them.

The fact that the injection of protein produces an eosinophilia suggests that the cells may be concerned with the disintegration and removal of protein from the body.

Although it is well known that eosinophilia is characteristic of allergic response, its function in hypersensitive states is not understood. The adrenal gland probably is intimately concerned.

Considerable evidence is at hand indicating the importance of hormonal activity in hematopoiesis. The depressing effect of ACTH and cortisone upon the circulating eosinophils is well known. A similar effect produced by epinephrine probably through mediation of the hypophysis and adrenal cortex forms the basis for the epinephrine-eosinophil response test.

DISORDERS CHARACTERIZED BY EXTREME EOSINOPHILIA

1. Allergic conditions: highest in asthma and angioneurotic edema
2. Skin diseases: highest in pemphigus and dermatitis herpetiformis
3. Parasitic infestation with tissue invasion; highest in:
   (a) Trichinosis
   (b) Visceral larva migrans
4. Loeffler's syndrome: probably due to parasitic larval invasion
5. Tropical eosinophilia: probably due to parasitic larval invasion
6. Familial eosinophilia: probably due to parasitic larval invasion
7. Diseases of the hematopoietic system:
   (a) Leukemia (many cases probably due to larval invasion)
   (b) Hodgkins disease
   (c) Chronic myelogenous leukemia
8. Infections:
   (a) Scarlet
   (b) Chorea
   (c) Erythema multiforme (not in rheumatic fever)
   (d) Syphilis
   (e) Lymph node tuberculosis with extensive caseation
9. Splenectomy
10. X-ray irradiation

CHART 1

A brief review of the causes of eosinophilia as observed clinically may be of value. The data presented are drawn freely from Wintrobe's "Clinical Hematology," with certain additions from other sources.

Chart 1 gives in brief outline the disorders characterized by marked eosinophilia. In the present state of our knowledge regarding the function of the eosinophil, one is forced to ascribe the eosinophilic response to allergy not only in 1, but also in 2, and probably 8.

The definite proof of larval infestation of the viscera producing an extreme eosinophilia suggests that certain other symptom complexes which in the past have been classified as ill defined entities very probably are due to this etiological agent. This seems particularly true in the case of Loeffler's syndrome and tropical eosinophilia. It is also quite likely that many of the instances of so-called familial eosinophilia are in fact cases of visceral larva migrans. Atmar's[6] report of a Mexican woman with leukocytosis and eosinophilia in whom the typical lesions of larval infestation were found in the liver was attributed to familial eosinophilia, since her two brothers, one sister and two children had eosinophilia. It seems more logical to assume that all were infected with some type of larva.

Authoritative cases of eosinophilic leukemia are very rare. Most of the cases so classified show few if any immature forms, either in peripheral blood or bone marrow studies. Under such circumstances certainly the diagnosis of leukemia is highly questionable. It seems much more probable that many of these cases are really instances of visceral larval infestation.

The diagnosis in *Case 1* of this report is probably that of visceral larva migrans; in *Case 2* such a diagnosis seems proven on the basis of the histological findings in the liver, although the larvae were not identified. In *Case 3* there is certainly room for considerable argument. The sequence of events and the symptoms suggest a marked allergic response rather than larval infestation. However, there was the story of ascaris infestation of the intestinal tract three months preceding the acute illness and there seems to be sufficient evidence both clinically and patho-

logically to conclude that visceral larva migrans at times is a self-limited disease. Therefore such larval infestation cannot be absolutely excluded.

Nevertheless the acute phase of the illness in *Case 3* was quite short. It is difficult to conceive that the destruction of the larvae and the healing of the lesions took place in the liver, or in any other viscus, in this short period of time.

No conclusions can be drawn as to therapy in any one of the cases reported. Certainly in *Case 1* the acute phase was over and the child was clinically well before ACTH was given. One would expect the drop to normal of the eosinophil count, which occurred on the administration of the hormone, but one might definitely question the wisdom of the measure. Eosinophilia is obviously a defense mechanism, similar to polymorphonuclear leukocytosis in suppurative infections, and destruction of this defense barrier may be harmful.

In *Case 2* there is some evidence that hetrazan® proved beneficial. Although the fall in temperature after its administration was not dramatic, still cause and effect are suggested. Beaver's case responded in a similar manner and was normal one year later. Such observations would make it appear that hetrazan® is the drug of choice in such infestations.

In *Case 3*, as in *Case 1*, the child was clinically well before therapy was begun. We were simply trying to influence an abnormal blood count which in itself is a questionable procedure. The eosinophilia dropped rather slowly between March 3, 1951 and April 26, 1951, the period during which the antihistamine (pyribenzamine®) was given. It seems likely that this change would have occurred without therapy.

SUMMARY

Three cases of extreme eosinophilia in infancy and early childhood are reported. Two of these children probably suffered with visceral larva migrans; the third most probably was due to a marked allergic reaction.

A brief review of the pertinent literature concerned in the proof of the existence of the clinical entity "visceral larva migrans" is given. A short discussion of the functions of the eosinophil and an outline of the disorders characterized by eosinophilia are presented.

REFERENCES

1. Loeffler, W.: Successive Transient Pulmonary Infiltration with Eosinophilia. Beitr. z. Klin. d. Tuberk., **79**:368, 1932.
2. Perlingiero, J. G.; and Gvorgy, P.: Chronic Eosinophilia; Report of a Case with Necrosis of the Liver, Pulmonary Infiltration, Anemia and Ascaris Infestation. Amer. J. Dis. Child., **73**:34 (Jan.) 1947.
3. Zuelzer, W. W.; and Apt, L.: Disseminated Visceral Lesions Associated with Extreme Eosinophilia; Pathologic and Clinical Observations on a Syndrome of Young Children. Amer. J. Dis. Child., **78**:153 (Aug.) 1949.
4. Mercer, R. D.; Lund, H. Z.; Bloomfield, R. A.; and Caldwell, F. E.: Larval Ascariasis as Cause of Chronic Eosinophilia with Visceral Manifestations. Amer. J. Dis-Child., **80**:46 (July) 1950.
5. Beaver, P. C.; Snyder, C. H.; Carrera, G. M.; Dent, J. H.; and LaHerty, J. W.: Chronic Eosinophilia Due to Visceral Larva Migrans. Pediatrics, **9**:7 (Jan.) 1952.
6. Atmar, R. C.: Familial Eosinophilia: Report of a Case with Biopsy of Liver. J.A.M.A., **115**:449 (Aug. 10) 1940.

DISCUSSION *(Abstract)*

Dr. Walter H. Sheldon, Atlanta, Ga.—It is interesting to note how, during a few years, a puzzling subject is becoming clear, and how the strange syndrome of eosinophilia is being better defined.

I was introduced to this subject by Dr. Roberts and I should like to discuss the histologic findings observed in the liver biopsy from the second patient.

The general lobular pattern of the liver was not distorted. There was, however, a marked cellular infiltration chiefly involving the portal spaces and sometimes extending into the parenchyma. The lesions were granulomata. These often contained numerous foreign body type multinucleated giant cells. Eosinophilic polymorphonuclear leukocytes were always present in large numbers. Some lymphocytes, plasma cells, and occasional large mononuclear cells were encountered. Despite our efforts, no larval forms could be identified, but within and among the multinucleated giant cells there were fragments of eosinophilic material which might represent portions of dead larvae.

These granulomatous lesions closely resembled those reported by other observers.

This is the first time that I have seen this sort of lesion. How safe are we in assuming that this lesion is caused by a parasite and not by some other agent? Can a neoplastic process be ruled out? There is nothing here to suggest Hodgkin's lymphoma. A number of the so-called collagen diseases are characterized by eosinophilia. Here we find none of the vascular involvement or connective tissue changes which characterize the collagen disorders.

I think, therefore, that this case fits the diagnosis of larva migrans. The histologic findings suggest that the patient's immune mechanisms have effectively handled the agent and that probably nothing much in the way of live antigen remains.

Dr. G. A. Shawkey, Charleston, W. Va.—I should like to ask Dr. Roberts whether he has observed or read about this condition occurring in a cyclic or repetitive manner. I have seen it so occur.

Dr. S. J. Kranson, Independence, Mo.—I should like to get Dr. Roberts' comment about the relative merits of the better known antihelminthic agents, particularly a comparison of hetrazan® and hexylresorcinol in his experience.

Dr. Roberts (closing).—The diagnosis and treatment of these cases was made possible through the studies of the various investigators whose work is described in the paper.

Unfortunately, no skin tests with specific antigens were carried out on our patients. Since the pathology of the liver appears to be definite, the omission of such tests is not too important.

I have not observed the cyclic nature of the symptoms in larva migrans as suggested by one speaker; however, there might be a recurrence after a remission. It is quite possible that *Case 2*, a patient who is still showing a marked eosinophilia, may be in a state of remission rather than cure. Only time will tell.

Hetrazan® apparently has proved more satisfactory than any other drug in the treatment of the disease under discussion. However, up to the present time very few cases treated with this agent have been reported. Its use was suggested to the original investigators by the successful treatment of filaria and ascaris with it. Various schemes of treatment have been employed both intermittent and continuous. Only by careful observation of the individual case will we be able to determine the most effective plan.

SOME ADVANCES IN PEDIATRIC ANESTHESIA*

By THOMAS S. GRIGGS, M.D.
Miami, Florida
and
JOHN ADRIANI, M.D.
New Orleans, Louisiana

During the two-year period ending July, 1953, extensive work in the field of pediatric anesthesia has been carried out at Charity Hospital in New Orleans, Louisiana. The following problems were studied:

(1) A closed system anesthetic apparatus suitable for pediatric use that embodies all of the features of the usual adult apparatus.
(2) Parasympathetic depressing drugs to abolish or minimize secretions.
(3) Improvement of endotracheal tubes.

Unfortunately progress in the development of apparatus for pediatric anesthesia has not kept pace with that of adult apparatus. As a result the most commonly used method of anesthesia in pediatrics today is still the open drop technic. In children this technic is neither the safest or the best as is frequently stated. The second most commonly employed method is the semi-closed non-rebreathing technic, popularized by Leigh, Stephen and Slater. While this method serves admirably in many circumstances few will deny that it is inadequate when one wishes to use positive pressure or enclose inflammable gases or vapors. The rebreathing technic has not been used extensively in pediatrics because heretofore the apparatus was inadequate. With this in mind we proceeded to eliminate the defects in the adult apparatus which caused it to be useless for pediatric anesthesia.

The first problem was to eliminate the mechanical dead space contained in the obturator and mask. The gases in this space are breathed without having come into contact with the soda lime. The average Y-chimney obturator for the Foregger circle filter has a dead space of 40 cc. The dead space in a standard 8 x 13 cm. to and fro set up exclusive of the mask is 60 cc. This volume of dead space is of less consequence in an adult since the average adult tidal exchange is approximately 500 cc. However, the tidal exchange is as low as 5 to 10 cc. in premature infants and ranges up to 150 cc. or so in a child of 4 to 5 years. In these infants and children the dead space in the obturator plus that in the mask can easily exceed the tidal exchange. All the subject does is to rebreath the mixture in the mask and obturator. An obturator composed of two tubes, one inside the other, was constructed. The inspired gases are conducted through the outer tube to the mask. The expired gases return through the center tube to the rebreathing bag. This construction completely eliminates the dead space in the obturator *(Fig. 1)*.

The next question was what to do about the mask. Obviously no universal mask can be devised which will be satisfactory for all children. Irrespective of the type of mask one might develop, one would be compelled to vary the size of the face piece to suit each case. The problem of dead space in the mask was solved by incorporating a "wash out bulb" in the apparatus so that the mask could be flushed with fresh gases continuously or as

*Read in Section on Anesthesiology, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

*From the Department of Anesthesia, Charity Hospital of Louisiana, New Orleans, Louisiana.

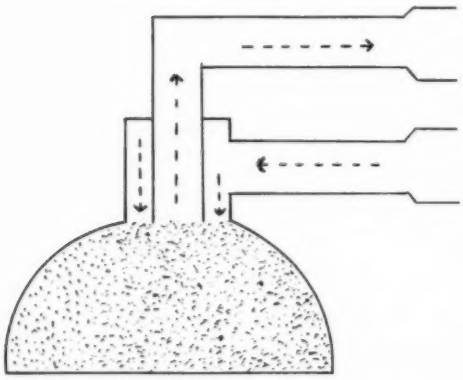


FIG. 1

Obturator suggested for pediatric use. The outer tube conveys gases to mask. The inner tube conducts gases away from mask. Dead space is completely eliminated by the arrangement.

indicated. A two-way action bulb with 50 cc. capacity, of the type used for stomach pumps, is arranged with a tube about 2 feet long at each end. One tube is connected to an adaptor on the breathing bag. The other is connected to a nipple on the obturator. In this way carbon dioxide free gases are pumped from the rebreathing bag and delivered into the mask. The bulb is operated by hand and is used as needed particularly during induction or when one wishes to deepen or lighten the anesthesia quickly. This "wash out bulb" serves a two-fold purpose: (1) it allows constant "washing out" of the mask so that the dead space is always flushed with fresh gas, and (2) it accelerates the mixing of the gases.

The next detail requiring attention was construction of the valves. Most of the resistance in the standard circle type apparatus is caused by the valves. The standard mushroom or flute valve is too stiff, large and heavy for infants and children. We, therefore, constructed a valve of very light material that seats horizontally. This is incorporated in the standard housing and merely substituted for the adult type. The resistance is practically nil.

The size of the breathing bag was next considered. The bag was reduced in size for three reasons: (1) the tidal exchange is small in infants and children and the respiratory efforts are hard to discern by observing the movements of the average 5-liter bag, (2) the 5-liter adult bags are stiff. When filled to capacity they cause a positive pressure to develop in the apparatus against which an infant has difficulty in breathing and (3) the volume of the entire apparatus is reduced proportionally so that the mixing occurs with greater ease. A small, light, latex bag of 500 cc. capacity answers the purpose for the smallest premature infant up to a year or so of age. A latex bag of 1,500 cc. capacity answers the purpose for children up to 6 or 8 years of age.

This apparatus is especially recommended for long cases in which smooth, even anesthesia is desired or in cases where the thoracic cavity is to be opened, as in the case of congenital cardiac patients. It, however, will serve equally well in any type of case requiring inhalation anesthesia.

This apparatus has been used exclusively, for over a year and a half at Charity Hospital in New Orleans, and since July at Jackson Memorial Hospital in Miami with very gratifying results in all pediatric cases ranging from premature infants 2 or 3 hours old up to 6 or 8 years of age.

The second topic concerns drugs used for premedication to diminish or abolish secretions. It is well known that atropine, the old stand-by is not always effective in infants and children. Besides, the pediatricians object to its use because of side actions. We, therefore, conducted a study comparing the "drying effects" of atropine, scopolamine, hyoscyamine,* banthine,® demerol® and various antihistamines to see whether a more suitable agent could be found. Atropine and hyoscyamine are chemically similar, both alkaloids being tropine tropate. Atropine, however, is a mixture of the two optical isomers, dextro tropine tropate and levo tropine tropate. It is therefore racemic and does not rotate, polarized light. Hyoscyamine is the levo derivative. It rotates polarized light to the left. In general levo derivatives of alkaloids are more active pharmacologically than the dextro or racemic forms. Scopolamine is almost like hyoscyamine and atropine in structure, the difference being that it has an extra oxygen atom on its molecule. All three drugs have a dual action. Atropine and hyoscyamine depress the parasympathetic division of the nervous system causing a decrease in activity of the salivary

*Marketed under the trade name of bellafoline.®

glands. They also stimulate the entire brain including the brain stem in which the respiratory center is located. This is one of the reasons why they are used in conjunction with morphine in adults. They counteract to a large extent its depressing effect on respiration. Scopolamine also depresses the parasympathetic nervous system and causes a decrease in secretions. However, instead of stimulating the cortex as do atropine and hyoscyamine, it depresses it. This causes an amnesia particularly when combined with narcotics such as morphine, demerol,® methadone and so on. Amnesia is a desired state in any patient undergoing surgical procedures. The effects on the medulla are like those of atropine and hyoscyamine. It overcomes respiratory depression also.

Atropine, scopolamine and hyoscyamine are administered according to weight. Age, height or sex are not taken into consideration. The following table is used:

Up to 20 pounds body weight 1/500th grains.
20 to 45 pounds body weight 1/250th grains.
45 to 70 pounds body weight 1/175th grains.
Over 70 pounds body weight 1/125th grains.

We prefer not to use morphine or codeine for premedication of our infants or children but instead give seconal® intramuscularly in doses ranging from ½ to 1 mg. per pound of body weight. An aqueous preparation is now available for intramuscular use. Scopolamine and hyoscyamine have been found to be superior to atropine in these studies. Both are of approximately equal efficiency in minimizing secretions. The effect is established within 10 minutes when either is given intramuscularly; within 5 minutes when given intravenously. No side effects such as rash, tachycardia or hyperthermia have been noted.

Demerol,® a synthetic narcotic drug which is said to possess an atropine-like action was totally inadequate for preventing secretions for ether anesthesia. The antihistamines were also totally inadequate for this purpose. Banthine,® while efficient as a drying agent, was too short in its action, lasting only 30 to 40 minutes. Besides, the side actions of marked hyperthermia and tachycardia caused it to be impractical. Its use is not advised.

Improvement of endotracheal tubes was the third factor considered. An efficient endotracheal tube should have the following qualities:

(1) It should be constructed of thin-walled material. This gives the greatest possible inside diameter in relation to outside diameter.
(2) The material should not be easily compressible. This prevents obstruction.
(3) The construction should be such that it does not enter the trachea as far as the carina.
(4) The bevel should be such that it does not press against the surface of the trachea, producing obstruction.
(5) It should be easily cleansed and sterilized.

We have been unable to find an endotracheal tube that answers these requirements.

In order to obtain a better insight into the size of endotracheal tubes needed for various aged infants and children we visited the morgue for many months. Here we measured the diameter of tracheas and the distance from the vocal cords to the carina in infants as small as 700 grams to children up to 13,600 grams. The following data were obtained.

In 50 premature infants ranging from 700 to 1,825 grams the anterior-posterior diameter was 1.5 to 2.0 mm.; the lateral diameter was 3.0 to 4.0 mm., and the distance from the vocal cords to the carina was 4 to 4.5 cm. Children weighing 5,000 grams had an anterior-posterior diameter of 3 mm.; the lateral diameter was 5 mm. and the distance from the cords to the carina was 5.5 cm. Children weighing 7,500 grams had an anterior-posterior diameter of 3.5 mm.; the lateral diameter was 7 mm. and the distance from the cords to the carina was 6.5 cm. Children weighing 13,600 grams had an anterior-posterior diameter of 4 mm.; the lateral diameter was 8 mm. and the distance from the cords to the carina was 8 cm.

With these figures as a guide we proceeded to construct an endotracheal tube as follows: the central core was thin-walled plastic tubing with an outside diameter of 4 mm. and an inside diameter of 3 mm. A standard number 18 French McGill rubber tube was fitted over this plastic tubing and secured with rubber cement. The plastic tubing extended beyond the rubber tube at one end for a distance of 3.5 cm. The bevel on the plastic tube at this end is on the posterior or convex surface. On the opposite end the rubber tube extends beyond the plastic tubing enough to permit the

introduction of a standard number 0 slip joint. The overall length of the tube is 12.5 cm. This tube can be introduced with ease in a premature infant weighing as little as 700 grams and is adequate for infants six to eight months of age.

A larger tube of exact construction using plastic tubing with an outside diameter of 6 mm. and an inside diameter of 4.75 mm. and a number 29 French McGill tube was constructed. The plastic tube extends 4.5 cm. beyond the rubber tube. The opposite rubber end permits the introduction of a number 1 slip joint. The overall length of the tube is 20 cm. This tube can be used in infants from 8 to 12 months up to 2 or 3 years of age *(Fig. 2)*.

SUMMARY

Thus, we have prepared an apparatus which provides closed system anesthesia for pediatric patients. The standard single or double canister Foregger circle filter is quickly converted by changing the chimney adaptor, the bag and its adaptor, and the valves. One can have a set of valve housings with these special valves already mounted at hand and make the change at a moment's notice. Any agent may be used. It may be converted to a semi-closed unit, if one wishes. Positive pressure can be given. Ether vaporizers, canisters, exhalation valves, tubes, and so on, are standard.

Atropine, hyoscyamine, scopolamine, demerol® and banthine® were studied as agents to minimize secretions. Hyoscyamine and scopolamine are far superior to the other agents and are of equal efficiency in minimizing secretions. Since the original work we have discovered scopolamine does not protect the heart from vagal stimulation whereas hyoscyamine does. As the result of these observations we are now using a combination of these drugs with excellent results. Equal parts of these two agents are used to make up the total required dose as given in the table.

We feel we have satisfied all the requirements necessary for a better pediatric endotracheal tube, namely:

(1) The thin-walled plastic material used gives the maximum inside diameter possible in relation to the outside diameter.

(2) Either the plastic or rubber tubing alone would be compressible but when combined they are practically non-compressible.

(3) The bevel is on the convex instead of the concave surface as usually found in most endotracheal tubes. The opening therefore is toward the center of the trachea rather than toward the wall.

(4) The larger diameter at the junction of the rubber and plastic tubing prevents the introduction into the trachea as far as the carina.

(5) It is easily cleansed with soap and water and sterilized by a cyanide solution usually employed in sterilizing ureteral catheters. If a plastic material of thin-walled construction which can be autoclaved, can be obtained in the future, we shall be happy to go this one step further in sterilization even though we do not feel that it is absolutely necessary.

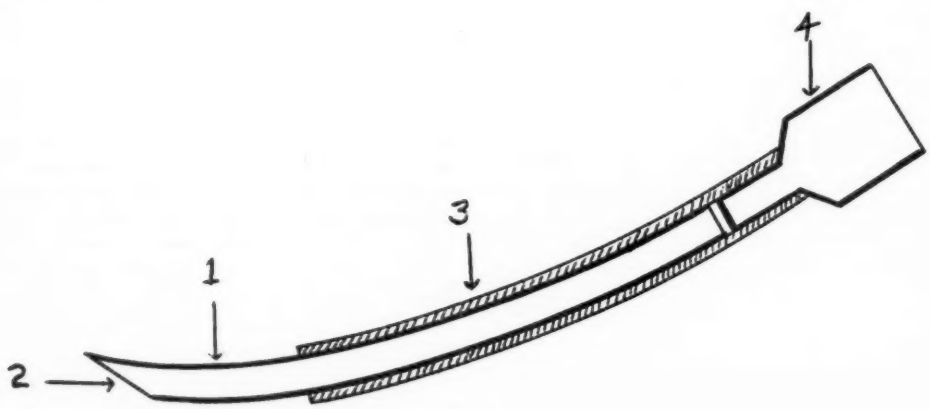


FIG. 2

Endotracheal tube suggested for pediatric use. (1) Plastic tubing. (2) Bevel toward lumen of trachea. (3) Rubber tubing. (4) Slip joint.

PRESENT DAY TREATMENT OF ASTHMATIC PATIENTS*

By MASON I. LOWANCE, M.D.
Atlanta, Georgia

"The time has come," the walrus said, "To talk of many things, of shoes and ships and sealing wax, of cabbages and kings."

—Which time-honored observation can well be applied to our gathering here today, as we pause to take a panoramic view of the advances medical science has made in coping with cabbages and their sometimes calamitous effect on kings. The time has truly come for us to recognize these advances and the changes they have brought about in the management of today's asthmatic.

With your permission I should like to open this paper with a question. What can the 1953 allergist do for the asthmatic that the pediatrician, the otorhinolarynogologist, the general practitioner, the internist or even the patient himself cannot do? At first glance one might be inclined to reply, "Nothing." But this is a thoughtless answer without real perception; for, like the specialist in any other field of medicine, the allergist, having concentrated his full efforts on a particular condition, is better able to interpret, evaluate, and treat it. It is as simple as that and the line is as flexibly drawn.

Let us take a case history of asthma and its treatment for the past quarter century. Since this coincides with my own years of practice, I can speak with the authority of one who has been there to witness first-hand the changes he describes.

Twenty-five years ago much was being said about asthma, but, like the weather, little was being done about it. To be sure such a forward looking institution as the Cleveland Clinic had seen fit to establish a "Chair" of allergy. But literally a chair it was (with table) set up in a hallway and scantily equipped with a tray of skin-testing materials. This laboratory was available for any physician who wished to experiment therewith. Parenthetically, I should like to say that the Cleveland Clinic now has an elaborate corridor complete with every facility for the treatment of allergy. Then, though it recognized allergy as a difficult problem, it could contribute little toward solving it. In this it was not unique. Other medical institutions likewise had a minimum of equipment. As a matter of fact, in 1928, our entire armamentarium consisted of a nominal number of non-standardized extracts for skin testing (they are still non-standardized), some foreign protein material, epinephrine, ephedrine, iodides, arsenic, intravenous typhoid vaccine to produce pyrexia, other vaccines, and x-ray therapy. Such was the physical set-up (the props, so to speak) of the stage onto which the prospective allergist walked twenty-five years ago.

Nor did the attitude of the medical profession as a whole offer the specialist in allergy much encouragement. Most medical men regarded the newcomer as a poor misguided idealist at best; as a quack, at worst. But, paradoxically, some of the doctors did support him, gladly relinquishing to him the chronic and stubborn asthmatics with whom they had been struggling for years unsuccessfully. The surgeon also often found occasion to call him to stand by while he operated upon a patient, lest an attack be precipitated by the anesthesia or other agent. The allergist, it will be noted, was called, not because of the attending doctor's faith in the efficacy of his treatment, but because he, himself, did not relish the responsibility for managing an unknown (to him) quantity.

Not until the discovery of sulfonamides was this outlook materially altered, although there were, meanwhile, rather extensive experiments being made with fever therapy, iodized oil in lungs, and even sympathectomy. A period of excessive skin-testing and extract-giving also preceded the so-called miracle drugs. In defense of those of us who were forced to rely somewhat heavily on skin testing and desensitizing extracts during this time, I might say that we did accomplish something with them. And there are occasions now, if the condition warrants it, that we still do a few (or even extensive) skin tests.

Various and myriad treatments were resorted to during these intervening years. Lean years they were progress-wise, compared with accomplishments and discoveries of the nineteen forties. Research men explored every possibility in the laboratory, the allergist in

*Read in Section on Allergy, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

his office. All were working toward a common goal: specific relief for an ancient and perplexing disease. The psychiatrists made overtures to the allergists during this time but were promptly, and not too wisely, rebuffed. I recall that the late Dr. Newdigate Owensby was one among several who, as far back as 1940, tried shock therapy in the management of asthma and urticaria, with partial success. Indeed, long before the allergists were willing to admit an affinity between psychiatry and allergy, the psychiatrists were suggesting their measures as a valuable aid in controlling allergic disorders. Endocrinological therapy, with its far-reaching implications, was experimented with about this time also and a relationship partially established.

Today, no well-informed person questions for a moment the effect of anxiety, tensions, emotional stress, the glandular functions, et cetera, on the overall behavior of the human body. That the treatment of these conditions, however, could be directed advantageously toward relieving allergic symptoms was considered, until recently, but the figment of a lively imagination by the majority, if indeed it was considered at all. Allergy now accepts with an open mind everything that the other fields of medicine have to contribute.

With the advent (and acceptance by the allergists) of the sulfa drugs in 1938, the progress made in the treatment of allergy has been as phenomenal as it has been rapid and as rapid as it is heart-warming. The antibiotics, ACTH and cortisone followed the sulfonamides. Only those of us who, a short while ago, had to stand by helplessly and watch an asthmatic fight for every molecule of oxygen that reached his blood know how to appreciate the amazing and blessed relief these drugs offer. Today's patient, assuming he can read, hear or afford a television set, knows more about the control of asthma than did the specialist of yesterday. Furthermore, the medical profession's educational program has taught the patient how to administer his own medication promptly, thus circumventing many severe attacks.

Nor is the patient the only one who is treating allergy these days. The pediatrician, recognizing the effect of an allergen on one of his young patients, increases the child's tolerance for it with extracts. When an infection rears its ugly head he has at his disposal the antibiotics. He is fully aware of the influences of heredity and the frequent benefits of a change of climate. Since he and the allergist read the same books and have access to the same current periodicals, seldom does he call in the latter except to confirm his diagnosis and treatment. I am not registering a complaint. To the contrary, I am paying tribute to a group of men who are doing their jobs well. The fact that allergic disorders are getting this early attention has greatly decreased the incidence of pulmonary emphysema, bronchiectasis, and other complications, which conditions used to plague the allergist's daily schedule. In a community where good pediatrics is practiced it is a rarity to find an adolescent boy or girl suffering from an exaggerated case of any one of these conditions that has resulted from childhood asthma. But as happy as is this state of affairs, it poses a problem, or at least a challenge to the specialist. Before he sees the patient, the allergy will have been treated by another doctor (or an array of doctors) with the identical and only drugs the allergist himself has at his disposal. Again, I say, I am not complaining. I am stating a fact. But to continue.

Should the pediatrician fail to recognize the allergic condition, the otorhinolaryngologist will, in all probability, have the opportunity to treat it. He, too, has read the same books and subscribes to the same periodicals as his colleagues. And when the offending sinus turns out to be an allergy he may do a few skin tests and prescribe some extracts. Seldom does an allergic child reach the specialist without having had his condition recognized and treated by the pediatrician, an otorhinolaryngologist or both. But should such be the case he is almost certain to have been under the regular care of a general practitioner. Now the general practitioner often has the added advantage of having known the patient since birth and of having observed his heredity and history at first hand. He may experiment with a few skin tests (packaged, the chances are, by a pharmaceutical house), and he will probably interpret their results well. (The value of a complete history, we all admit, cannot be overestimated.) He may suggest allergy casings for the pillows, dust-free rooms, and if the patient is old enough to

smoke he may insist that tobacco be eliminated (this last drastic step, only at the risk of breaking up a beautiful friendship). But the allergy may still doggedly present itself.

In this case the internist is next visited. He takes a thorough history, does a physical, laboratory tests, x-rays, and utilizes every facility at his disposal to give the patient as complete a picture as possible. This view of the "total man" allows him to interpret both the history and the physical findings more accurately. He may, for want of a remedy yet untried by his new patient, suggest a change of location or vocation. He is aware of drugs and procedures currently being used to treat allergy and he will run the gamut of them all in an effort to relieve the unfortunate victim of a stubborn condition which has defied the efforts of all those who have endeavoured to help him.

Finally, and in desperation, the patient comes to the allergist after, as has been noted, already having had at least one bout with every drug in the medical profession's little black satchel. He will probably discuss with intelligence and out of his own experience the effect each has had on his own particular sensitivities. He may understand his physical make-up and the psychological factors that play a part in the persistence of his disorder, and he may subconsciously resent the fact that his present physician has no new miracle drug to offer him. What is more logical, he may ask the question which we ourselves are asking today: "What can the allergist now do for him that some other doctor has not already done?"

Before we try to answer this question, may I ask another? Does not this same situation exist in many or most of the other specialized fields of medicine? What, for example, can the cardiologist do for a heart condition that the well-informed general practitioner cannot do? And what about the obstetrician, the gynecologist, the dermatologist? The answer in every instance is similar, if not identical. Each can and does draw on his more specialized knowledge and from his broader experience, to interpret the history, clinical findings, and contributing factors of his patient's condition more competently. By the same token he can usually treat it with less trial and error; for just as the surgeon's hand grows more adept with each successive use of the knife, just as the orthopedist's fingers become more sensitive and proficient with each bone he manipulates, so does the allergist improve with practice and his innumerable encounters with the same conditions. He is aware of minute details that a less dedicated man might let slip by; he understands what they indicate and what to do for them. In the light of his more specialized knowledge he views the patient and prescribes for him, confident that the sum total of all that is at present known about allergy, is at his finger tips. A valuable by-product of this knowledge is the confidence which it, in turn, inspires in the patient. In other words, although the allergist may actually do nothing new for the patient who has tried everything, he will, nevertheless, approach his task from the vantage point of experience, and what he does he will do more expertly. Let us put it in the form of a familiar analogy. A man, during the course of his life, may have owned many fine suits of clothes. They may have been cut from the best and most expensive imported woolens. Their dyes and color tones may have been what the current fashion dictated. But never, we will assume, has he worn a suit designed and executed for him alone by a master tailor. He has never had clothes cut to do credit to his particular shoulders or padded to disguise an unfortunate anomaly in one of them. He has never had the advantage of individual sartorial styling. I give you the allergist, an expert craftsman, trained to cater to the individual needs of the individual patient.

Now by way of summary and reference, I should like to list for you the drugs and various treatments that are the heritage of the present day physician who would treat asthma. Some of these date back to the "Cleveland Clinic Chair" era; others are additions too recent to have been properly evaluated; most of them make a poor showing before the dramatic power of the miracle drugs. But medicine, being the inexact science it is, and the normal person a rarity, we must still resort, at times to them all, both old and new, both dramatic and undependable. It has been impossible, of course, to list all combinations of basic drugs which are duplicated under different labels by different pharma-

ceutical houses. Their counterparts are, however, here. (*Table 1*).

In conclusion then shall we say that with the same drugs available and the same procedures known to all, the distinguishing attributes of the skilled practitioner (the allergist) are: (a) his ability born of experience and concentration to prescribe the proper treatment for the particular condition; (b) his soundness of judgment; and (c) the confidence that his specialized knowledge inspires in the patient.

DRUGS AND TREATMENT

1930 and Before

Epinephrine (hypo and aerosol)
Ephedrine and combinations
Iodides
Arsenic
Ether by rectum (1-3)
Asthma powders (potassium nitrate and stramonium)
Sedatives, mild
Nathan Tucker spray®
Glandular extracts
Transfusions
Oxygen
Vaccines
Hyposensitization to allergens
Avoidance of allergens
X-ray therapy
Elimination of infections
Nutrition, adequate
Hydration, adequate
Hospitalization
Change of climate
Bronchoscopy
Sympathectomy
Psychotherapy

Recent Experiments

Butonephrine®
Norisodrine®
Isuprel® 10 mg., sublingual
Nephenalin® (tab.)
Aludrine® (tab. or inh.)
Antihistamines (for sedative effect)
Demerol® (minute doses)
Aminophyllin (i.v. or suppos.)
Vitamins of various kinds

Dubious Experiments

Eskel® (khellin), 40 mg.tab.bid
Procaine (i.v.)
Ultra short-wave to the pituitary
Nitrogen mustard (i.v.)
Piromen® (3-10 gamma, i.v. q 2-10 days)
Butazoladine®

Dramatic Additions

Sulfonamides
ACTH and cortisone
Penicillin, aureomycin, terramycin® and other antibiotics

TABLE 1

Discussion follows next paper, page 333.

BRONCHIAL AND CARDIAC ASTHMA*

SIMILARITIES AND DIFFERENCES

By EUGENE B. FERRIS, M.D.
Atlanta, Georgia

Since heart failure manifests itself frequently through the respiratory system and chronic lung disease frequently results in heart failure, it is to be expected that confusion may arise concerning the differential diagnosis of heart failure and pulmonary disease.

I chose the particular title of cardiac and bronchial asthma for this discussion, first, because the subject matter is appropriate to the field of allergy which traditionally encompasses bronchial asthma; second, because the nature of cardiac asthma is still somewhat confused and therefore, worth discussing; and third, because the differential diagnosis of bronchial and cardiac asthma is a common clinical problem and sometimes a difficult one.

The term, cardiac asthma, is used interchangeably with paroxysmal nocturnal dyspnea to describe the acute attacks of dyspnea and air hunger which occur frequently in patients with weakness of the left ventricle.

Osler's[1] description of the attack in 1897 is still a good one:

"In cases of advanced arteriosclerosis, there are often attacks of dyspnea of great intensity recurring in paroxysms, often nocturnal. The patient goes to bed feeling quite well, and in the early morning hours wakes in an attack, which in its abruptness of onset and general features resembles asthma. There is usually a sensation of precordial distress, a feeling of constriction and oppression. Two other features about this form of attack will attract your attention: the evident effort in the breathing, and the presence of a wheezing in the bronchial tubes and of moist rales at the base of the lungs. The patient may spring from the bed and throw open the window in his terrible air hunger, and he assumes an attitude most favorable to the working of all the accessory muscles of respiration. Slight cyanosis is usually present, and in severe paroxysms, a cold sweat breaks out in the face and limbs. The pulse is feeble, often irregular and very small."

Weiss and Robb[2] made a detailed study of the clinical and physiological features of cardiac asthma in 1933 which still remains the best study of its kind to date. The lack of in-

*Read in Section on Allergy, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

tensive study of the subject before and since is due to the fact that the attacks have usually subsided before a physician can arrive to observe, and our experience is generally limited to the extremely severe attacks which require hospitalization and the milder attacks which are seen from time to time in hospitalized patients. Let us quote Weiss and Robb's description of an attack of cardiac asthma:

"The majority of attacks are associated with both inspiratory distress and with ronchi (wheezes) and moist rales. The respiratory mid-position of the thorax becomes elevated and there is a tendency for the chest to become fixed in a forced inspiratory position so that respiration is almost entirely diaphragmatic. . . . During attacks there is also a striking inspiratory retraction of the entire lower half of the thorax, most marked in the intercostal spaces. . . . A cold sweat usually breaks forth . . and may drench the patient. Nocturnal periodic nervousness, cough, and paroxysmal pounding of the heart . . . are equivalent manifestations of mild cardiac asthma."

And now a description of the attack of bronchial asthma by Segal:[3]

"The attack may vary in intensity from simple tightness or heaviness of the chest to marked dyspnea with characteristic noisy (wheezing) respirations. Attacks are more frequent at night. At the height of the seizure the patient presents a pitiful sight. He sits or stands in a flexed position, with his back rounded and his chest, shoulders, and head fixed. . . He is drenched with cold sweat and is tense, anxious, and apprehensive. During inspiration the accessory muscles of respiration . . . stand out in desperate contraction; there is marked retraction in the supraclavicular and intercostal spaces. Expiration is prolonged and labored . . The diaphragm is low . . and the chest . . fixed in its over distended position. . . . Initially, an utterly useless cough may be present. Moist rales are rare unless associated with pneumonitis, atelectosis, or bronchiectosis."

As you can see, the attacks of cardiac asthma and bronchial asthma are essentially the same, except that in the case of bronchial asthma, the underlying cause lies within the lungs and in cardiac asthma, in the heart. This accounts for the basic differential diagnostic features of the two conditions, namely: that the lungs are relatively free of congestive rales in bronchial asthma and rales are usually present in cardiac asthma. Not infrequently, however, the lungs are clear in acute cardiac asthma and we must resort to the x-ray which shows the typical butterfly hilar congestion in cardiac dyspnea and its absence in bronchial asthma. In general the long history of previous attacks in bronchial asthma, the presence of enlarged heart on examination or by x-ray, and previous history of cardiac disease help in the differential diagnosis. However, I have seen heart failure heralded by nocturnal episodes indistinguishable from bronchial asthma, and the development of asthma in a patient without a previous history of allergic manifestations should make cardiac failure suspect. In both instances, the attacks are nocturnal, and have in common an element of bronchial constriction which produces the wheezes. In both instances, the increased resistance to flow of air through the narrowed bronchial tree leads to air hunger and dyspnea. The dyspnea of bronchial narrowing differs from that of simple congestive heart failure in that in the former, gradual distention of the lungs and thoracic cage occurs so that the chest assumes a fixed inspiratory position. This happens primarily because inspiration is usually an active muscular process and expiration is a passive process supported normally by little or no muscular activity. When the bronchi narrow the strong inspiratory muscles draw adequate amounts of air into the lungs but expiration is ineffective and prolonged and the need for more oxygen calls for another inspiration before all the previously inspired air and accumulated carbon dioxide can get out. By this gradual process the lungs and thorax expand and the diaphragm falls so that in the severe acute attack of bronchial narrowing due either to bronchial or cardiac asthma we can observe the patient literally blowing up like a blow fish.

In general, the development of acute emphysema is less common in cardiac asthma because a great deal of the dyspnea and air hunger here is due to pulmonary congestion from failure of the left heart while that caused by bronchospasm may be only a minor part of the picture. In the case of bronchial asthma, bronchial obstruction is the main component of the picture, yet the advanced stage of asthma with marked emphysema, leads to pulmonary hypertension, decreased heart output and right ventricular strain. The resulting anoxemia and secondary heart failure may finally lead to pulmonary edema, a picture indistinguishable from primary heart failure.

In observing many cases of paroxysmal dyspnea over the years I have been impressed by

the fact that the dyspnea is often not accompanied by wheezing or other evidences of bronchial constriction such as the development of acute emphysema. Where wheezing does occur it responds to the same type of treatment that bronchial asthma responds to, namely, aminophylline or epinephrine. The more severe the wheezing, the greater the total improvement in the dyspnea. In instances of paroxysmal dyspnea without wheezing, I have not been impressed by the response of the dyspnea to bronchial dilators.

This leads me to the main point I wish to make, namely, that paroxysmal dyspnea or acute left ventricular failure may or may not be accompanied by bronchial constriction and only in those instances where wheezing and other signs of bronchial narrowing occur should the term cardiac asthma be applied. The mechanism whereby bronchial constriction may accompany heart failure is not well established. Reflexes arising from the congested lungs and pulmonary circulation have been suggested but there is no real proof for this. The fact that the phenomenon occurs in certain individuals with heart failure and not in others suggests that an individual susceptibility or an "asthmatic" anlage may be required. There is no clear-cut evidence to implicate an allergic diathesis in cardiac asthma; however, it is not infrequently accompanied by an eosinophilic response.

It is of interest that evidence is accumulating to indicate that psychological stress factors are of great importance in the initiation of attacks of both cardiac failure and bronchial asthma. Psychiatric studies[4] suggest that the asthmatic attack frequently results from situations in which the patient is threatened with the loss of an important source of love and dependency in his or her life such as a mother or mother figure. Patients suffering with asthma have difficulty in crying in such situations, and the asthmatic attack is sometimes a sort of substitute for crying. In a study of patients with congestive heart failure, Reiser and Chambers[5] in my laboratory showed that most episodes of heart failure occurred in relation to stressful life situations, which were in the main related to loss of sources which had met their strong dependent needs such as parents, or parent substitutes. Whether those cardiacs who wheeze have personalities more like the true asthmatic has not yet been investigated.

In any case we do know that the patient with heart failure has a marked fear of impending death, and is anxious and apprehensive. It is possible that the psychological stress of the heart attack itself may result in bronchial constriction and wheezing in those patients whose bronchopulmonary system has a peculiar susceptibility. That anxiety plays an important role in both bronchial asthma and cardiac failure is suggested by the frequently observed and dramatic response of such patients to the protective environment of a hospital alone or to the arrival of a trusted physician, and to the well known dramatic response to morphine in both conditions. The mechanisms whereby the bronchi respond to emotional stress is not known but there seems more to it than a simple reflex.

With regard to treatment, cardiac and bronchial asthma are alike in their positive response to morphine, to epinephrine and to aminophylline. Although morphine is very effective in bronchial asthma, we do not use it because of the danger of habit formation in such a chronic illness and because, in severe asthma, where every ounce of respiratory effort is essential to life, morphine and other respiratory depressants may cause rapidly fatal anoxia by lessening respiratory exchange. Epinephrine, though it clears up the wheezes in cardiac asthma, is not used in the cardiac because of its potentially harmful effect on the coronary circulation. Aminophylline is an excellent bronchodilator in both cardiac and bronchial asthma and can be used safely and effectively in both.

To summarize: acute left ventricular failure or paroyxsmal dyspnea may or may not be accompanied by wheezing. When it is, it is called cardiac asthma and the wheezing (or broncho-constrictor) component behaves in every respect like bronchial asthma, including its response to anxiety relieving and bronchodilator management. Although still hypothetical, the evidence suggests that asthma in the cardiac is a response to cardiac failure which occurs in certain individuals peculiarly susceptible to broncho-constriction.

REFERENCES

1. Osler, William: Lectures on Angina Pectoris and Allied States, p. 81. New York: Appleton and Company, 1897.
2. Weiss, Soma; and Robb, G. P.: Cardiac Asthma (Paroxysmal Nocturnal Dyspnea). J.A.M.A., **100**:1843, 1933.
3. Segal, Maurice S.: The Management of the Patient with Severe Bronchial Asthma. Amer. Lecture Series, No. 76, p. 6. Springfield, Illinois: Charles C. Thomas, Publisher, 1950.
4. French, T. M.: Psychosomatic Medicine. Monograph IV, 1941. Weiss and English: Psychosomatic Medicine. Philadelphia: W. B. Saunders Company, 1951.
5. Chambers, W. N.; and Reiser, M. F.: Emotional Stress in the Precipitation of Congestive Heart Failure. Psychosomatic Medicine, **15**:38, 1953.

DISCUSSION *(Abstract)*

Papers of Dr. Mason I. Lowance and Dr. Eugene B. Ferris.

Dr. George W. Owen, Jackson, Miss.—At times we see true bronchial asthma in a patient with relatively mild hypertension. Many times we see that individual go right on to the point of cardiac failure. In other words, we see both cardiac asthma and true allergic bronchial asthma in the same patient. I sometimes am made to wonder whether or not our internists recognize the ill effect of an attack of true bronchial asthma upon the cardiac asthma. I have had occasion to see this just recently. The two conditions do exist in the same individual at times, and are exceedingly difficult to treat. I do not hesitate to call a cardiologist in all such cases.

I should like to ask Dr. Ferris a question. Does he use epinephrine in the combined cardiac and bronchial asthma?

I left two patients in the hospital with bronchial asthma and cardiac asthma when I came to this meeting. One was admitted because of pulmonary edema which occurred the day before I left. One of these patients had a blood pressure of 210 systolic on admission and I asked the internist what his reaction would be to the use of ACTH in this case. I was under the impression that we should not use ACTH in such cases. The internist felt that we should take the calculated risk and use ACTH even though the patient had hypertension.

In the case with pulmonary edema, this question of course, did not come up. It was a matter of controlling the cardiac situation.

Dr. Maurice S. Segal, Boston, Mass.—There are striking differences between acute left ventricular failure or cardiac asthma and acute bronchial asthma. The patient with recurring cardiac asthma practically always has underlying hypertension, hypertensive heart disease, coronary insufficiency, or disease of the aorta. His attacks as a rule are controlled by digitalis, salt restriction, mercurials, *et cetera*. When doubtful in differentiating the bronchoconstriction of bronchial asthma from that of cardiac asthma, the use of intravenous histamine or acetyl-beta-methylcholine may be employed. A classical attack of bronchial asthma will be induced by these agents in patients with chronic bronchial asthma.

Certainly the clinical manifestations may resemble each other but the experienced observer should be able to distinguish between the two disorders. Dr. Ferris has clearly made this distinction possible.

Dr. Henry D. Ogden, New Orleans, La.—One of the things mentioned by Dr. Lowance is the use of arsenic in the treatment of asthmatics. There has been quite a bit of discussion about this recently and I think it deserves more attention.

Many of us have seen patients who have been benefited by treatment of asthma given by the Gay Clinic in Biloxi. We have all seen patients who either have had or will have this regimen prescribed.

Apparently the major medication consists of the so-called "red medicine" which contains potassium chloride, Fowler's solution, and phenobarbital. Digitalis may be included.

There is no question in our minds about the use of chlorides or phenobarbital. Our main interest is in the use of arsenic which is present in the Fowler's solution. I am not sure about its mechanism of action. One thought that has been suggested is that it may stimulate the adrenal cortex to produce cortisone.

However, reactions to arsenic should be recognized and warrant discussion.

The reports that I am about to quote have all been published. In the *Journal of the American Medical Association*, Prickman and Millikan of the Mayo Clinic, on August 29, reported:

"The treatment of asthma with potassium arsenite (Fowler's solution) is potentially hazardous. Hemorrhagic encephalopathy developed rapidly in a man who was given potassium arsenite for treatment of asthma. This case illustrates only one of several hazards incident to arsenic therapy for asthma; others have been reported in J.A.M.A. and elsewhere. The self-administration of arsenic compounds without the supervision of a physician is strongly condemned."

Pascher and Wolf (J.A.M.A., March 1, 1952) reported two cases of cutaneous manifestations of arsenicalism following the prolonged and indiscriminate use of an arsenic containing remedy (Fowlers' solution) in the treatment of bronchial asthma. Arsenical keratoses and keratoderma followed in one case and arsenical pigmentation in both cases. They note that cutaneous manifestations of chronic arsenicalism may appear as early as one month or as late as 30 years after the ingestion or parenteral administration of the drug.

Silver and Wainman (J.A.M.A., October 11, 1952) reported a patient who had been supplied with an arsenical mixture for almost three years without being re-examined. They comment that the statement from the clinic that prescribes and dispenses the medicament that there were no serious toxic effects in 10,000 patients seems unacceptable in view of the lack of follow-up investigation.

Pelner and Waldman (J.A.M.A., December 13, 1952) observe that there are probably many cases of toxic action of arsenic that are not being diagnosed today because of the profession's unfamiliarity with this syndrome. Sollman has noted that "Inorganic arsenic

is capricious, unpredictable, and uncontrollable both as to good and harm; but the harm is more certain and generally more frequent than the good."

Possibly we should be using more arsenic than we have been using, since the treatment is effective in a large number of patients.

Dr. Lowance (closing).—It is most important that the allergist make a differential diagnosis before he does skin tests or starts treatment. Is he dealing with asthma, pulmonary emphysema, bronchiectasis, or carcinoma?

Dr. Ogden mentioned the use of arsenic, and I would emphasize his statement that where arsenic is used the patient should be under very careful observation.

I see a number of patients who have been treated at Biloxi. Those who respond to that climate are benefited. Most asthmatic patients profit by a change of environment, relief from business stress or other business responsibilities. All patients who go to Biloxi are started on iodides and those who have not used some form of iodine before, will usually be benefited by it.

Dr. Ferris (closing).—I do not greatly stress blood pressure in connection with susceptibility to cardiac failure. The occurrence of hypertension and asthma together is not a great rarity.

In asthma, where there is a good deal of air hunger, many patients respond with rising blood pressure. In these cases the blood pressure will come down to normal if you give them 100 per cent oxygen.

With respect to the use of ACTH where bronchial constriction and resulting air hunger and fatigue become critical, my tendency is to go ahead and give ACTH as it can be given safely if certain precautions are used. We have had experience with high doses of ACTH and cortisone in patients with heart failure when at complete bed rest and have not had any difficulty with it so long as the salt intake is kept very low, 0.2 gram per day. Somewhere between the kitchen and the bedside some mistake may be made or the family may bring salt-containing food to the patient. In cases where salt may be very dangerous, urinary sodium or chloride should be followed to be assured that the salt intake is low.

Dr. Mayer asked about the circulation time in cardiac asthma. There is no particular change in the circulation time or in the venous pressure in left ventricular failure. Circulation time may be normal, and venous pressure may be normal. The reason for that is that in acute failure of the left ventricle, there is an increase in pulmonary pressure but the right ventricle may function normally so that the cardiac output is not decreased and there is very little, if any, change in the circulation time, cardiac output, or venous pressure. The circulation time and venous pressure may, of course, be quite altered in patients who have chronic emphysema and then get attacks of status asthmaticus, as they already have right heart strain and the asthmatic attack precipitates cor pulmonale.

INITIAL PROGNOSIS IN ACUTE MYOCARDIAL INFARCTION*

By MARTIN S. BELLE, M.D.
MORTON M. HALPERN, M.D.
and
LOUIS LEMBERG, M.D.
Miami, Florida

The initial prognosis of acute myocardial infarction has acquired great practical significance because recent reports[1-4] recommend that anticoagulants be withheld from "good risk" cases. These authors maintain that in the early hours of an attack a decision concerning the prognosis can be made, and thus it may be decided whether or not anticoagulants should be used immediately. However, in most instances this conclusion was based on data collected from a review of case histories after completion of the hospital course; in addition, prognostic categories were determined in retrospect. On the other hand, the American Heart Association Committee for the Evaluation of Anticoagulants[2] recommends that all cases of acute myocardial infarction should be given anticoagulants, providing no specific contraindication exists. They contend that the prognosis cannot be determined with certainty during the first 24 hours, nor can the subsequent occurrence of thrombo-embolic complications be predicted.

Russek[3] emphasized the following findings as being significant in determining a poor prognosis: (1) previous myocardial infarction; (2) intractable pain; (3) extreme degree of persistence of shock; (4) significant enlargement of the heart; (5) gallop rhythm; (6) congestive heart failure; (7) auricular fibrillation or flutter, ventricular tachycardia or intraventricular block; (8) diabetic acidosis, marked obesity, previous pulmonary embolism, varicosities in the lower extremities, thrombophlebitis (past or present) or other states predisposing to thrombosis. According to him, the above criteria can be used in initially classifying a case into a "good" or "poor" risk category. Thus he is able to use

*Read in Section on Medicine, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

*From the Departments of Cardiology, Jackson Memorial and Mercy Hospitals, Miami, Florida.

anticoagulants selectively in the early hours of an attack.

Furman[4] and his group also evaluated the use of anticoagulants based on prognostic categories. The presence of shock, congestive failure, diabetes or azotemia within the first week of the attack indicates a "poor risk." They added another group classified as a "very poor risk" when any of the following combinations were found: (1) first attack with shock and diabetes or azotemia; (2) history of previous attack and congestive failure plus diabetes or azotemia.

It is agreed[2,5] that early in the course of an acute myocardial infarction one should decide what therapy to use in order to influence most favorably the course of the patient. Therefore, if a decision concerning anticoagulant therapy is made on the basis of a "good" or "poor" prognosis, it should be made when the patient is first seen. Only in this manner will the selective use of anticoagulants be practical.

The purpose of this study was to determine how soon in the course of an acute myocardial infarction the prognosis could be estimated with a satisfactory degree of accuracy; and to evaluate the factors which differentiate a "good risk" from a "poor risk" patient. Whether one can selectively use anticoagulants based on the initial prognosis and the clinical impression of the physician will be the subject of another report.[9]

MATERIALS AND METHODS

All the patients studied were hospitalized on private or staff services. The cases were neither selected nor consecutive. A heterogeneous group of physicians, including cardiologists, internists, general practitioners and residents, attended these patients. No preliminary instructions were given to the doctor concerning the criteria that determined a satisfactory or poor prognosis. A check list was filled out when the patient was first seen. The case was then placed in a "satisfactory" or "poor risk" category. The basis for the prognosis included not only the criteria that appeared on the list, but the initial clinical evaluation of the attending physician. Twenty-four and 48 hours later, a re-evaluation of the prognosis was made and recorded. The use of anticoagulants was left up to the attending physician. The check list and charts were reviewed after the patient's course was completed in the hospital. The term "satisfactory risk" is used interchangeably with "good risk." A "mortality" was defined as any death occurring during the period of observation.

RESULTS AND COMMENTS

One hundred and sixty-seven cases were collected in this study. Of these, 50 were discarded because the clinical, laboratory and electrocardiographic findings were questionably diagnostic of acute myocardial infarction. Ten died in the first 24 hours of hospitalization and since it is unlikely that anticoagulants could have altered their course, they were not included. These 10 included nine with intractable shock plus pulmonary edema and one with a questionable ventricular arrhythmia. There remained 107 cases to be analyzed.

There were 81 males and 26 females. The majority of deaths occurred after the age of 60 in both sexes. Russek[6] pointed out that a greater number of serious attacks occur in the aged, but the prognosis for a severe or mild attack is unaltered by the age of the patient.

There was a total of 15 deaths exclusive of those in the first 24 hours, 14 per cent *(Table 1)*. After reviewing the histories, corrections in the classifications of the patients were made due to a history of heart failure or myocardial infarction, which, as will be shown, indicates a serious prognosis. Therefore, 15 cases were changed to the "poor risk"

	59 Satisfactory Risks			48 Poor Risks			Total				
	Cases	Died		Cases	Died		Cases	Died			
		No.	Per Cent		No.	Per Cent		No.	Per Cent		Per Cent
Received anticoagulant	39	2	5.1	43	11	25.6	82	13	15.8	14.0	21.4
No anticoagulant	20	1	5.0	5	1	20.0	25	2	8.0		
Died during the first twenty-four hours								10			

TABLE 1

category. Thirty-nine patients in the "satisfactory risk" group received dicumerol, with two deaths (5.1 per cent). Twenty in this category did not receive dicumerol and one died (5 per cent). One out of five "poor risk" cases that did not receive dicumerol died, while there were 11 deaths in the "poor risk" group (25.5 per cent).

The significant facts in the history that placed a patient in a "poor prognostic" category were previous myocardial infarction or congestive heart failure *(Table 2)*. Seven (29.2 per cent) patients with previous infarctions and two of the five cases with heart failure died (40 per cent). Only five patients with previous congestive failure were included; in our opinion the presence of failure makes the patient a "very poor risk" and he usually does not survive long enough to reach the hospital. On the other hand, the prognosis is favorable in an individual experiencing his first attack. Of fifty-six cases, five died, a mortality of 8.9 per cent.

During the attack, the presence of severe shock and pulmonary edema are the most ominous signs *(Table 3)*. Of the seven patients with severe shock who survived the first 24 hours, two died (28.6 per cent). Four of the eight cases with pulmonary edema died (50 per cent). There was no difference in the mortality rate in individuals with mild or severe pain; however, if intractable pain was present, the mortality was 20 per cent. There were 24 patients who had some form of arrhythmia which included premature contractions. Five of these died (20.8 per cent); however, if those with premature contractions were deleted, the mortality rate would be much higher.

In the course of these patients, certain significant facts evolved *(Table 4)*. There were seven who developed thrombo-embolic phenomena. Schnur[7] says that the frequency with which the diagnosis of thrombo-embolic complications are made depends upon the index of the suspicion of the physician. Indeed, at times it is very difficult to make a diagnosis of pulmonary infarction or infarction of other organs. Therefore, any statistical data on thrombo-embolism must be viewed with caution. Seven cases of thrombo-embolism occurred with two deaths (8 per cent). There were six patients who we agreed had recurrent infarction. Three of these died (50 per cent). This diagnosis is not made easily; therefore, one must carefully evaluate data which discuss its occurrence and prevention. Twenty-six cases developed heart failure; of these, 10 died (40 per cent). As mentioned above, the appearance of congestive failure at any time is a particularly ominous sign.

History of	Cases	Deaths	Per cent Mortality
Angina	41	6	14.6
Myocardial infarction	24	7	29.2
No infarction	56	5	8.9
Hypertension	26	4	15.4
Diabetes	5	0	0
Heart failure	5	2	40.0

TABLE 2

The Acute Attack	Cases	Deaths	Per Cent Mortality
Shock, mild	33	4	12.1
Shock, severe	7	2	28.6
Pain, mild	46	4	8.9
Pain, severe	61	5	8.5
Pulmonary edema	8	4	50.0
Arrhythmia	24	5	20.8

TABLE 3

	107 Cases													
	59 Satisfactory Risk Cases						48 Poor Risk Cases							
	39 Received Anticoagulant			20 None			43 Received Anticoagulant			5 None		Total		Died	
	No.	Per Cent	Died	No.	Per Cent	Died	No.	Per Cent	Died	No.	Died	No.	Per Cent	No.	Per Cent
Thrombo-embolism	2	5.1	1	0		0	5	11.6	1	0	0	7	6.5	2	28.6
Recurrence or spread of infarction	1	2.6	1	1	2.6	1	4	9.3	1	0	0	6	5.6	3	50.0
Heart failure	2	5.1	2	3	15.0	1	20	46.5	7	0	0	25	23.4	10	40.0
Bleeding	4		0	0		0	1		1	0	0	5	4.7	1	20.0
Absent QRS changes	5		5	9		0	3		1	0	0	17	15.9	1	5.6

TABLE 4

Significant bleeding occurred in five cases, all with anticoagulants. One of these died with a ruptured abdominal aneurysm. Anticoagulant therapy may or may not have been a factor in this case. The absence of QRS changes during the course of an attack was a good prognostic sign. Only one of 17 such cases died.

One of the most important facts that we learned from analysis of our data was that the prognosis of 31 (29 per cent) of the patients was changed during the first 48 hours *(Table 5)*. Six of these changed from a "satisfactory" to a "poor risk" and of these, four died. Twenty-four changed from "poor" to "satisfactory risk" and three died (12.5 per cent).

In the series of Billings,[8] patients admitted in the first 24 hours after the attack had a lower mortality than those entering the hospital between the twenty-fifth and the ninety-sixth hours. In this study, the opposite was true. All 15 deaths occurred in patients admitted during the first 24 hours. This may be due to the fact that in this area where a great number of cardiacs reside, both the physician and the patient may be alerted to significant signs and findings of the acute attack. Those that are not admitted early probably are not considered sufficiently ill; consequently there may be a natural selection of the "good" and "poor risk" cases during those early hours.

SUMMARY

(1) A study of 107 cases of acute myocardial infarction was made with patients being classified as a "satisfactory" or "poor risk" when initially seen, 24 and 48 hours later. The basis for the prognosis was made by the evaluation of the clinical criteria present and the clinical judgment of the attending physician.

(2) An attempt was made to determine whether differentiation of patients into "satisfactory" or "poor risk" categories would enable one selectively to use dicumarol® in the "poor risk" group.

(3) Twenty-nine per cent of our patients had a change in their prognostic category within the first 48 hours. The highest mortality occurred in the first 48 hours of the attack. Therefore, it is impossible to determine prognosis with a sufficient degree of accuracy in the first 48 hours of an attack of acute myocardial infarction.

(4) A history of heart failure or myocardial infarction and the appearance of severe shock, pulmonary edema or significant arrhythmia are poor prognostic signs. In their absence, a first attack of myocardial infarction, especially with no QRS changes, indicates a favorable prognosis.

(5) No deaths occurred in patients who were admitted 24 hours after the onset of an attack. This may indicate that there is an element of natural selection in that these patients as a whole were not so severely ill as the ones admitted immediately.

CHANGE IN PROGNOSIS DURING THE FIRST 48 HOURS

	Cases	Died
Satisfactory to poor	6	4
Poor to satisfactory	24	3
Satisfactory to poor to satisfactory	1	0
Total	31	7

29.0 per cent of 107 cases changed prognosis in first 48 hours

TABLE 5

CONCLUSIONS

(1) It is hazardous to differentiate a "poor" from a "satisfactory risk" case of acute myocardial infarction in the first 48 hours of the attack.

(2) After 48 hours using the criteria enumerated, one may differentiate a "poor" from a "satisfactory" risk case with an adequate degree of accuracy.

(3) Further studies are needed to evaluate this approach.

REFERENCES

1. Russek, H. I.; Zohman, B. L.; Russek, A. S.; White, L. G.; and Doerner, A. A.: Indications for Bichydroxycoumarin (Dicumarol) in Acute Myocardial Infarction. Circulation, **5**:707, 1952.
2. Wright, I. S.: An Evaluation of Anticoagulant Therapy. Amer. J. Med., **14**:720, 1953.
3. Russek, H. I.; Zohman, B. L.; White, L. G.; and Doerner, A. A.: Indications for Bishydroxycoumarin (Dicumarol) in Acute Myocardial Infarction. J.A.M.A., **145**:390, 1951.
4. Furman, R. H.; Ball, Con O. T.; Gale, R. G.; Billings, F. I., Jr.; and Meneely, R. G.: Anticoagulant Therapy in Myocardial Infarction Based on Prognostic Categories. Amer. J. Med., **14**:681, 1953.
5. Russek, H. I.; and Zohman, B. L.: Editorial—Anticoagulant Therapy in Acute Myocardial Infarction. Amer. J. Med., **14**:651, 1953.
6. Russek, H. I.; Zohman, B. L.; Doerner, A. A.; Russek, A. S.; and White, L. G.: Age and Survival in Cases of Acute Myocardial Infarction. J.A.M.A., **147**:1731-1733, 1951.
7. Schnur, S.: Mortality and Other Studies Questioning the Evidence for and Value of Routine Anticoagulant Therapy in Acute Myocardial Infarction. Circulation, **7**:855, 1953.

8. Billings, F. T.; Kalstone, B. M.; Spencer, J. L.; Bell, Con O. T.; and Meneely, G. R.: Prognosis of Acute Myocardial Infarction. Amer. J. Med., 7:356, 1949.
9. Halpern, M.; Belle, M. S.; and Lemberg, L.: Selective Use of Anticoagulants. To be published.

DISCUSSION *(Abstract)*

Dr. E. Sterling Nichol, Miami, Fla.—Two years ago when the subject of making a group study came up, I declined, because up to this juncture I have not felt justified in withholding anticoagulants from any private case of myocardial infarction that came into my hands.

I think at the outset it should be borne in mind that Dr. Russek and his co-workers and Dr. Furman and his co-workers are not against anticoagulants in myocardial infarction. They are simply trying to do a good job of establishing whether or not every case of myocardial infarction that comes along should have the benefit of anticoagulants.

As explained by the speaker, the data in the papers that Dr. Russek and his group have published, dating back over the last seven or eight years, were obtained from a review of files, after the party was all over, which is different from a study at the bedside. I think studies similar to the authors' report should be carried on all over this country, and the world.

Experience teaches us that often we have been fooled at the onset of acute coronary thrombosis. Dr. Belle emphasized that 29 per cent of his cases changed their category from either a good risk to a bad risk, or vice versa, yet only 6 cases changed from good risk to poor risk, which lends more weight to the idea that it is possible to choose good risk cases. I cannot accept that thesis because of sad experiences that have accumulated, and I do not believe, in the last analysis, that it will be possible successfully to classify patients into good and bad risk groups.

If this point of view is correct, then certainly a paper on the use of anticoagulants in impending infarction that I presented before this Section five years ago should be thrown in the junk pile, because if one can pick out a good case or a bad case after the attack, certainly there is no point in trying to prevent the attack. I know a number of men who agree wholeheartedly that it is an impossibility at the bedside to make this prognostication.

The question of whether or not the data on anticoagulants that have been accumulated up to this point tell the whole story warrants scrutiny. Much of the data, including the American Heart Association data, were collected in hospitals of various workers, some of whom were still quite afraid of the use of anticoagulants, for which reason they gave too light doses.

The eventual publication of the American Heart Association data, which Dr. Wright promises will be gotten out in book form before long, may demonstrate that quite a number of patients actually received inadequate amounts of anticoagulants, which, I tell my confreres, is like a surgeon's putting a ligature around an artery without tying it tightly. There is just as much sense in doing that as in giving "token doses" of anticoagulants. For that reason I have always assumed the responsibility of taking some risk of hemorrhage rather than not getting the desired prophylactic effect.

Recently I had occasion to summarize my own private cases, well over 200, of acute coronary thrombosis in which we routinely used anticoagulants, starting with heparin as soon as possible provided there was no known contraindication. If you begin treatment with heparin they will be better and shock may be limited, because you may limit the area of infarction.

In this group of cases there were 133 first attacks, with a mortality of 6.8 per cent. The over-all mortality was about 15 per cent. The incidence of thromboembolization was 2 per cent, and I believe that is more like the results one should get if anticoagulants are used fully.

Dr. Paul D. Camp, Richmond, Va.—There is one thing I know about coronary heart disease which I always try to teach the students and tell the families, but not the patient, namely: that it is the most treacherous disease with which we have to deal. I do not believe that anybody is capable of saying which case is a good risk and which one is not, and certainly not when the patient first arrives in the hospital. For that reason, unless there are definite contraindications, I routinely use anticoagulants.

We had a series of 155 cases in private practice of proved myocardial infarction, and we used anticoagulants unless they were contraindicated. Where we did not use anticoagulants, the mortality rate was 37 per cent; where we did use it, the mortality rate was 11 per cent. We did not include the cases that died within the first two days.

Until somebody proves that anticoagulants should not be used—I shall continue to use them. Until somebody presents impressive figures, I shall not believe that he can prognosticate in the first 24 hours what is going to happen to any given case of myocardial infarction.

PROVISION OF MEDICAL SERVICES FOR SMALL INDUSTRIES*

By LESTER M. PETRIE, M.D.†
Atlanta, Georgia

Medical services for industry may be divided into two parts: (1) health maintenance within the plant (chiefly preventive), and (2) medical care. Industrial management and labor should give special attention to preventive services within the plant and refer cases for medical care to the practicing medical profession of

*Read in Section on Industrial Medicine and Surgery, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

†Director, Preventable Disease Services, Georgia Department of Public Health, Atlanta, Georgia.

the community. We are limiting our discussion here to health maintenance within the plant.

It is well recognized in industrial health circles that among the most urgent needs of the day are the health problems of small industry. Employers and employees in small plants have every right to expect a caliber of services from the health professions equal to those in the "full-time" occupational health departments of our larger industries. The efficiency of such departments depends upon professional teamwork with the physician, nurse, industrial hygienist and safety director, essential basic personnel on the team. Constant availability of health services administered through such teamwork at the place of employment or within a reasonably close distance appears to be essential if the caliber of service in small industries is to compare favorably with that in well run large plants.

Preplacement and periodical physical examinations of all personnel are basic functions designed to find cases of hidden disability. An equally important objective should be the appraisal of abilities. Chest x-rays, blood tests for syphilis, anemia and diabetes, special tests for industrial poisonings where hazards exist, aptitude tests, and the like appear to be readily available only where large organizations have made them so.

The Georgia Department of Public Health in a joint demonstration with the medical profession has proved the efficiency and economy of multiple test health survey technics on 1.5 million people. Eighty to 90 per cent of the tuberculosis and diabetes discovered had not been previously under medical supervision. As a result of the surveys those cases were referred to practicing physicians for care.

The division of Vocational Rehabilitation of the Georgia Department of Education is conducting a program for developing the abilities of so-called disabled persons. In both these examples, state governmental agencies have demonstrated technics that are nationally recognized.

In our private enterprise system, who is in a better position than business and industry to develop and use these technics to a maximum advantage? The very mass nature of performing routine periodic examinations of the 292,650 employed people in the Atlanta area, the majority of whom have no present complaints and will not be otherwise examined, precludes the practicability of such mass procedures except through organizational skills which can nowhere be better developed than by private industrial enterprise. Most of the workers in the Atlanta area are not being examined this year (exclusive of x-ray surveys by the health departments which reach less than half of them) nor will they be examined next year nor the year after unless some organizational method is found. If the examinations should be reliably done, thousands of cases of previously unrecognized disease would be found and referred to the practicing medical profession. It is more economical to find these cases early, while they can continue in their jobs and pay for treatment out of earned income than to delay until disability makes them public liabilities.

The informed employer, employee or physician today prefers early case finding and health maintenance to treatment of far advanced cases of diseases which could have been retarded or prevented, such as tuberculosis, diabetes, cancer, cardiovascular and renal diseases and the like; each prefers safety programs and accident prevention to traumatic surgery and accidental death. Unfortunately, many also prefer to shift the responsibility for preventive action to someone or anyone other than themselves. No one, however, employer, employee, internist, surgeon or mortician can restore the lost production which is preventable by early case finding, health maintenance and safety. These services are essential to the conservation of American health and manpower, and they are a primary responsibility of the profession of medicine as well as of management and labor. Health maintenance in small plants is a challenge to private enterprise, to small industries, to join hands with the unregimented health professions in a positive program of preventive medicine for their labor force. The government cannot do this job for them. If they want it done they must do it for themselves.

A number of more or less successful demonstrations of cooperative industrial health teamwork have been developed in scattered places. Some have been sponsored or administered by one or two of the three basic groups (management, labor, and the professions). Few, if any, are sponsored and administered in com-

plete mutual sharing of responsibility and understanding by all these groups. Usually the services are dominated by the thinking of individuals of one or two of the basic groups. It seems inescapable however, that the problem is a prime responsibility of each of the three groups, no one of which should be discriminated against, and no one of which should be permitted to dominate.

The late Dr. C. W. Roberts of Atlanta was one of the founders' group of the Council on Industrial Health of the American Medical Association in 1937. The Medical Association of Georgia has been represented at every Congress on Industrial Health held by the American Medical Association since the Council was organized. The program we are attempting to develop in Georgia was conceived in the minds of these leaders as interpreted in Georgia by such men as the late Drs. Dick Newberry and James Edgar Paullin.

In 1944 when Dr. Paullin was president of the American Medical Association in his address to the Congress on Industrial Health entitled "Industrial Health—A Restatement of Objectives" he said:

"The physician in industry should concern himself with prevention of diseases or injuries in industry by establishing proper medical supervision of industrial materials, processes, environments and workers with health conservation of workers through physician supervision and education and with medical care to restore health and earning capacity as promptly as possible following industrial accidents or diseases. An industrial medical department which fails to provide all of these activities is, by definition, substandard."

There are differing professional interests here between the internist in industrial medicine (who attempts to discover and control the causes of disability through preventive medicine inside the plant and in the community) and the traumatic surgeon who applies his skills to correct the disabilities after they have occurred. We all appreciate fully that a preventive program inside an industrial plant is not designed to compete with the traumatic surgeon. It does of course eliminate 40 per cent or more of the industrial trauma cases, but the cases which cannot be prevented or handled by simple first aid procedures inside the plant are still referred to the traumatic surgeon for surgical care.

In 1950 before the opening of the so-called Petrie Clinic in Atlanta (a small plant industrial health cooperative, owned, operated, and paid for by private enterprise) the entire project was subjected to a six months study in detail by the Board of Trustees of the Fulton County Medical Society and their legal counselor, assisted by consultants from the Council on Industrial Health of the American Medical Association and the Bureau of Legal Medicine of the American Medical Association. The late Dr. Raymond Hussey, Scientific Director of the Council on Industrial Health, concluded his report of this study as follows:

"In conclusion I should like to go a step further in stating the opinion that the plan drawn up for the cooperative industrial health clinic represents a positive approach to the fulfillment of the eleventh plank in the platform approved by the House of Delegates of the American Medical Association a year ago in covering objectives to combat the development of socialized medicine in the United States. Finally, briefly stated, it appears to me that the cooperative industrial health clinic is conceived in the spirit of preventive medicine in the best sense, and its planning indicates vision that is most commendable and worthy not only of the approval by organized medicine, but also of its hearty support."

The House of Delegates of the Medical Association of Georgia in 1950 unanimously adopted its committee report which said:

"The establishments in industrial areas of cooperative industrial health centers are sound and progressive steps."

On August 16, 1950 the following motion was passed before the Fulton County Medical Society without dissent:

"The Board of Trustees approved the Cooperative Industrial Health Center after Dr. Hussey from the American Medical Association and Mr. John Dunaway, our legal representative, stated that this did not conflict in any way with the ethics of the American Medical Association and the laws of the State of Georgia."

On July 23, 1952, at a meeting of the Committee on Industrial Health of the Medical Association of Georgia, the above approval by the Fulton County Medical Society was reaffirmed by Dr. John Turner, Chairman of the Board of Trustees of the Society.

In Georgia, a small plant industrial health cooperative in the town of Winder has successfully survived 10 years of operation. Cooperatives started in Griffin and Atlanta have dissolved. However, each plant which participated in the Atlanta experiment is continuing its own in-plant health maintenance service, and profiting from the lessons learned during the cooperative experience. The principal reasons for dissolving the cooperative arrangements in Griffin and Atlanta were mis-

understandings between individuals representing one or more of the basic groups: labor, management and the professions. These discordant factors were found not only between the groups as a whole but also between special interests within each group. This experience in Georgia, as well as similar difficulties reported from other places, makes it appear that a much more profound understanding is needed by the rank and file as well as the leaders of each of these three basic groups (employers, employees, and the professions) before many small plant industrial health cooperatives can be successfully established. In other words, a much wider distribution of health maintenance education appears to be a preliminary objective to be attained before successful cooperative health maintenance centers can be an accomplishment on any very significant scale. Physicians must learn to understand the role of management and labor; management must understand the viewpoints of labor and physicians; likewise labor must understand its relationships to physicians and management. Health education along these lines is a primary requisite.

At the Annual Congress on Industrial Health of the American Medical Association in January 1953, one afternoon of the program was given to the subject of community organization of industrial health councils where management, labor and the health professions can work out programs for the solution of their mutual problems. In line with this thinking, representatives of industrial management, labor, and the professions in Atlanta formed the Industrial Health Council of Greater Atlanta, Incorporated, which received its charter in January 1953. This council is a non-profit organization which has undertaken to find answers to the many problems related to health maintenance of industrial personnel and to promote cooperation among management, labor, and the professions.

The Council has established in an Atlanta industry a health education program as a pilot study and demonstration. It is seeking through the medium of health education to help each person help himself in maintaining his own health, in acquiring sound health attitudes and accurate health information and in developing good health practices. This established program reaches employers and employees. The Council seeks also to develop educational technics to reach the physicians and nurses and professional personnel of the other disciplines pertaining to the health program. The Council subscribes to the program of the Industrial Medical Association and the American Foundation of Occupational Health as outlined in the "Trustees Report of the Present Status" published in May 1953. It is hoped that these health educational programs may help pave the way to a better understanding of and provision for acceptance of adequate health maintenance services in the affected industries.

DISCUSSION *(Abstract)*

Dr. Richard M. Adams, Shreveport, La.—I should like to know the maximum number of employees that would qualify under a program like this, or the minimum number of employees which would justify a full time department, full time nurse and full time physician.

Dr. Edward M. Gunn, Hartsville, S. C.—I think Dr. Petrie's figure of 2,000 to 2,500 is too high. If I am not mistaken, some of our larger groups or industrial units, use a ratio of one industrial physician for each thousand employees or fraction thereof in excess of a thousand. Such a ratio is necessary if really adequate attention is to be given to a program of prevention and health education. I do not believe one physician can conduct an effective industrial health program and personally take care of 2,500 people, too.

Sad to say, this program conducted by distinctly interested and able people is not educating nor informing anyone who does not already know the subject. I believe that this Section should in the future present at least in part its program before a general assembly of the Southern Medical Association. Industrial medicine cannot gain ground until it convinces first the members of the profession who are in private practice. Then, it is in a position more effectively to convince management or labor of medicine's capacity to help. We need to increase our emphasis upon trying to show others in the medical profession, that their interests are not at stake, that carefully integrated industrial health programs are a responsibility of the medical sciences, and that they as individuals have a prominent part to play in this phase of medical care for the patient.

Dr. C. U. Dernehl, Texas City, Tex.—I, too, believe that Dr. Petrie's figure of 2,500 is too high. We can qualify it by saying that there are logically some plants where his figure would obtain.

Dr. Gunn has indicated from DuPont experience and from my own, which is also related to chemicals, the figure is very much too low. One can set a definite figure but must tailor the needs to meet the situation.

It was my idea this year to have a joint meeting between the industrial medicine and surgical group

and the general practitioners. It was not possible to bring it about. I believe it can be made highly successful.

One other possible way of approaching this problem is through efforts such as those at Houston, Texas, with the Regional Gulf Coast Conference on Industrial Health. Originally that program was set up, not for industrial physicians alone, but for management, labor, safety personnel and nurses: in short, for all who are associated with health in industry or are interested in it. This includes also the state agencies. They meet once a year and go over their problems.

Dr. Petrie (closing).—Dr. Adams asked the question as to maximum number of employees or the minimum number. I presume you mean the minimum number that could be taken care of under a cooperative plan and the maximum number needed for a full time medical service. The dividing line there is somewhat like the dividing line between two colors in the rainbow. It is our opinion that as a rule of thumb you might put the dividing line somewhere around 2,500 employees to justify the full time services of a single physician. If you get a much smaller plant, it does not justify his giving all his time to its preventive medical program.

So far as the size of a plant that can participate in a cooperative, I do not think there is any limit. I published a paper several years ago called "Health Maintenance in Small Plants." It outlines how industrial plants of any size can get together. The basic thing is, if they want to get highly specialized service, they have to have 2,000 to justify full time services of a physician to specialize in problems of industrial medicine.

If the community is sufficienlty small geographically so that one center can serve the entire community, then everybody, filling station operator, anybody else there that has any number of employees, can join the cooperative. The expenses can be prorated according to the number of employees receiving services.

COORDINATED HEALTH SERVICES OF COMMUNITY HOSPITALS AND LOCAL HEALTH AGENCIES IN GEORGIA*

By R. C. Williams, M.D.†
Atlanta, Georgia

There has been a slow but significant trend in Georgia within recent years toward voluntary cooperation between hospitals and local health units in meeting the health needs of the community. The primary function of the hospital is the care of the sick. Increasingly, the community hospitals in Georgia are becoming a center for the development of medical services for the area, a professional center for physicians and with the public health center a base from which all types of community health services can be organized. Local tax funds are being used to support both the public hospital and public health services. Community leaders are beginning to recognize the need and desirability for closer coordination of basic health care.

Fundamentally, the hospital, the public health program and the private medical practitioner are striving for one goal, to provide the best in health services for our people. An important phase of modern medicine is to keep the patient from becoming sick; failing in prevention, to make care available at an office, a clinic or in the home before serious illness develops and third, when both of these are ineffective, to have a hospital where both the physician and the patient will find the resources that modern medicine has developed for treatment and restoration of the patient to his normal state of health. The final responsibility for better health and medical services remains with the local community.

There are four geographic areas in Georgia that have achieved definite progress in coordinating local hospital and public health services. These cooperative programs have developed gradually over a period of years, as a result of leadership from within the community. Not any one organization can claim credit for bringing together the efforts of the physician, the dentist, the hospital and public and voluntary health agencies towards providing better health in these communities. The local public health physician in cooperation with local medical societies has in most instances been the coordinating medium for the fuller utilization of existing health resources.

Although relatively few local health departments have been given the responsibility for administering general hospitals or general medical care programs for the needy, diagnostic services have been an integral part of specialized programs in many health departments. Venereal disease, tuberculosis, and other communicable diseases are thus diagnosed.

Progress toward the integration of public

---

*Read in Section on Public Health, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

†Director, Division of Hospital Services, Georgia Department of Public Health, Atlanta, Georgia.

health programs and clinical activities has been made by the city-county health officers at Brunswick, Glynn County; Columbus, Muscogee County; Savannah, Chatham County; and Augusta, Richmond County. It is of interest to review briefly the history of the development of each of these coordinated programs in Georgia.

BRUNSWICK, GLYNN COUNTY

The city of Brunswick and Glynn County have the oldest organized public health program in Georgia. The citizens of this city and county, since the early days of our republic, have known from personal experience the importance of protection against preventable diseases. Being a seaport since 1771, epidemics of yellow fever, dengue, and smallpox were common in Brunswick for a period of more than one hundred and thirty years.

The local health department established in Glynn County in 1914 has been in continuous operation since that time. The personnel of the Glynn County Health Department at the time of its establishment consisted of the health officer, a visiting nurse, a bacteriologist, and a sanitary inspector.

From the time of its establishment until 1938, the efforts of the Department were directed primarily toward the prevention and control of the following diseases that at that time constituted the major health problems of the county:

Typhoid fever	Hookworm disease
Diarrheal diseases	Infant mortality
Malaria	Maternal deaths
Smallpox	Septic sore throat

Mosquito control and nuisance eradication were also among the duties assigned to the county health department. Tuberculosis and venereal diseases were recognized as public health problems but effective means of combatting them had not yet been developed.

In 1914 there was a hospital of thirty beds in operation in Brunswick. According to hospital records, the principal causes for admission were:

Heart disease	Pellagra
Cerebral hemorrhage	Arthritis
Tuberculosis	Pneumonia

The first marked change in the public health program in Glynn County began during the 1938-1940 period when an important decrease was noted in communicable diseases. Between 1921 and 1939, the cases of typhoid fever reported decreased from twenty-two to four; malaria from one hundred and seventy-six to ten; and diphtheria from twelve to 0 cases.

A notable change has taken place in the public health work in the 39 years since 1914. The eradication and control of many formerly common communicable diseases is now greatly lessened in importance. An aging population, increased industrial activities, together with the current high birth rate forecasts the need for increasing participation of hospitals in the public health work of the future.

Today the public health program in Glynn County includes not only immunization programs against typhoid fever, diphtheria, smallpox, whooping cough, mosquito and other insect control, sanitation, inspection of food handling in public places and supervision of water and sewerage disposal but such programs as:

(1) Diabetic clinics
(2) Tuberculosis control (including x-ray clinics)
(3) Maternal and child health work, such as
  (a) Prenatal clinics
  (b) Well baby clinics
  (c) Supervision of midwives
(4) Industrial hygiene
  (a) X-rays of industrial employees
  (b) Consultation and assistance to industrial nurses
(5) Cardiac clinic (average of thirty persons)
(6) Crippled children program
(7) Dental and medical inspection of school children
(8) Mental hygiene program
(9) Out-patient clinic for the treatment of indigent or medically indigent

These more recent public health problems listed above are of such character and extent that effective programs cannot be carried on without aid of specialized personnel and clinical facilities, including laboratory services, drugs, appliances, home nursing and related services.

Significant changes likewise have taken place in hospital facilities and services. The thirty-bed Brunswick City Hospital was expanded several times and today a completely new and modern hospital of 75 beds is under construction. In 1949, due to general public

dissatisfaction with the operation of the hospital, the management of the hospital was transferred to the City-County Board of Health, and the health officer became responsible for the administration of both the health department and the hospital. In the administration of the hospital, the health officer is assisted by a non-medical business administrator. Under this set-up, changes have been effected such as central purchase of drugs, the joint utilization of x-ray equipment and personnel, and coordination of out-patient clinics.

COLUMBUS AND MUSCOGEE COUNTY

Progress toward the integration of public health programs and clinical activities has been made by the City-County Health Officer at Columbus, Georgia, who is also administrator of the Columbus City Hospital. The Columbus City Hospital maintains out-patient service for the medical care of indigent residents of the city and county who have been found by proper investigation to be eligible for such service. Persons may be referred to the out-patient clinic from the hospital, from the several social service agencies of the community or by a public health nurse.

In addition to the regular out-patient medical clinics of the hospital which include the several branches of the medical and surgical services, the out-patient clinic also includes public health clinics as follows:

Prenatal	Diabetic
Well Baby	Cardiac
Orthopedic	Neuropsychiatric

The initial step in the integration of the clinical work of the hospital and the public health activities of the city and county was the consolidation of the out-patient records with the clinical records of the hospital. It is significant that the out-patient work of the hospital in Columbus is under the charge of an experienced public health nurse. All public health nurses of the city and county have access to the hospital and out-patient records in connection with patients who come under their observation.

All out-patient work is conducted in a building adjacent to the hospital. Prenatal and postnatal and venereal disease clinics are conducted at the hospital. A chest x-ray is made of all persons admitted to the hospital for whatever purpose.

A school of nursing is maintained at the Columbus City Hospital. This hospital also has ten interns and two residents. The School of Nursing, all public health nurses, nursing service of the hospital, and the School for Practical Nurses all are coordinated under one Director of Nurses with appropriate associate directors of the several branches. The out-patient work is utilized for the instruction of student nurses and has been an important factor in giving the public health or preventive viewpoint to the student nurses. The out-patient clinic has also served as a useful agent in training interns to handle office or out-patient clinics. Each year fifty families are selected from the welfare rolls. Each intern is assigned five families. He is expected to act as the family physician of these five families. He makes visits in their homes and has working with him the public health nurse for that area and the welfare worker.

For the purpose of comparison, fifty families have been selected who are on welfare rolls who will have no supervision except from representatives of the welfare office. In this way it is hoped to secure some idea as to whether the medical supervision and guidance provided by the interns acting in the capacity of the family physician will be reflected in a lesser amount of illness in the family and of decreased need for hospital care.

All obstetrical cases delivered in the hospital are referred to the public health nurse of the district concerned for two home visits after the mother returns to her home. These visits are made twenty-four and forty-eight hours respectively after she leaves the hospital. The public health nurse handling these cases also lists these mothers for their return with the baby to the well-baby clinic at proper intervals. All activities of the public health nurse and of the out-patient clinic are handled on a family basis.

One of the results of the coordinated efforts between public health nurses, the out-patient clinic and the hospital at Columbus City Hospital is that there is closer supervision of various types of chronic illnesses that may require, from time to time, a certain amount of hospitalization. As an example the clinic for diabetics at Columbus is well conducted, close contact being maintained between the clinic and public health nurse with this hospital. In that way the early occurrence

of gangrene, beginning of diabetic coma or other unfavorable symptoms are detected in the early stages. Results from this activity in the diabetic clinic are evidenced by the fact that for the past twelve months there have been no admissions to the City Hospital for any of the regular diabetic clinic out-patients. The hospitalization of other types of chronic cases such as cardiacs can probably be reduced in a similar manner.

At the Columbus City Hospital a medical social worker assumes an important role *(Chart 1)*. This medical social worker visits, at least once, every indigent patient receiving

ORGANIZATIONAL CHART
COLUMBUS CITY HOSPITAL
MUSCOGEE COUNTY HEALTH DEPARTMENT
CITY AND COUNTY COMMISSIONERS
BOARD OF HEALTH
HEALTH DEPARTMENT
COMMISSIONER OF HEALTH AND EXECUTIVE DIRECTOR, HOSPITAL
ASSISTANT COMMISSIONER OF HEALTH
ASSISTANT HOSPITAL ADMINISTRATORS
CITY COMMISSIONERS
BOARD OF MANAGERS
CITY HOSPITAL
HEALTH DEPARTMENT
ADMINISTRATION - Accounting, Purchasing, Personnel, Vital Statistics, Planning, Supervision
SANITATION - Milk, Water, Food and Environmental Sanitation, Insect and Rodent Control, Sewage Disposal
PUBLIC HEALTH NURSING - Clinics, Immunizations, Student and Practical Nurse Training, Field Visits, School Health, Group Teaching
MATERNAL AND CHILD HEALTH - Prenatal and Postnatal Care, Well Baby and Preschool Clinics
COMMUNICABLE DISEASES - Epidemiology, Tuberculosis and Venereal Disease Control, Tuberculosis Hospital
DENTAL HEALTH - Dental Health Education, Topical Fluorides, Corrective Children's Dentistry
MENTAL HEALTH - Group Therapy, Intelligence Testing, Consultations, Children's Emotional and Behavior Problems, Clinics
PUBLIC HEALTH EDUCATION - Public Relations, Group and Individual Education, Radio, Newspapers, Pamphlets, Bulletins
LABORATORY - Bacteriology of Communicable Diseases, Milk, Water and Food, Parisitology, Serology, Mycology
DIRECTOR OF NURSING
DIRECTOR, NURSING SERVICES
DIRECTOR, SCHOOL OF NURSING
DIRECTOR, SCHOOL OF PRACTICAL NURSING
DIRECTOR, PUBLIC HEALTH NURSING
MEDICAL STAFF
PHYSICIANS
RESIDENTS
INTERNS
MEDICAL AND SURGICAL SERVICES
IN - PATIENTS
OUT - PATIENTS
MEDICAL SOCIAL SERVICES
CITY HOSPITAL
ADMINISTRATION - Accounting, Purchasing, Personnel, Planning, Supervision, Training
NURSING SERVICES - Floor Nursing, Out-Patient Department, Emergency Room, Student Nurse, Practical Nurse and Aide Training, In-Service Training
SCHOOL OF NURSING - Student Nurse Training
SCHOOL OF PRACTICAL NURSING - Practical Nurse and Nurse Aide Training
MEDICAL RECORDS LIBRARY - Medical Records, Medical Library, Admitting Office, Information, Statistics
LINEN AND LAUNDRY - Linen Supplies, Sewing, Laundry
HOUSEKEEPING - Maids, Porters, Elevator Operators
MAINTENANCE - Heating, Refrigeration, Air-Conditioning, General Maintenance and Repairing
PHARMACY - Drugs, Biologicals
X-RAY DEPARTMENT - X-Ray Diagnosis, Treatment, Technician Training
LABORATORY - Pathology, Bacteriology, Chemistry, Parisitology, Hematology, Serology, Mycology, Technician Training
COORDINATION AND INTEGRATION HOSPITAL AND HEALTH DEPARTMENT SERVICES
ADMINISTRATION
PERSONNEL
MEDICAL RECORDS
NURSE TRAINING
PRACTICAL NURSE TRAINING
MEDICAL SOCIAL SERVICES
OUT-PATIENT CLINICS
PURCHASING
MAINTENANCE
PRENATAL AND POSTNATAL CARE
COMMUNICABLE DISEASES
PREMATURE BABY CARE
LINEN AND LAUNDRY
*HOME MEDICAL CARE
TUBERCULOSIS CONTROL
IN-SERVICE TRAINING
CHRONIC DISEASE CARE
INTERN AND RESIDENT TRAINING
PRINTING
CHILD HEALTH CONFERENCES
SANITATION
VITAL STATISTICS
MENTAL HEALTH
HEALTH EDUCATION

CHART 1

care in the hospital. There is also a psychiatric social worker attached to the hospital. The medical social worker and the psychiatric social worker act as consultants to the public health nurse as required. The welfare records of each indigent patient go into the hospital file on that patient. Muscogee County, in which Columbus is located, maintains a very well conducted county nursing home to which patients may be sent who cannot return to their own home or who have no home ties. This county nursing home provides, when necessary, domiciliary care for cases requiring such attention.

SAVANNAH AND CHATHAM COUNTY

At Savannah, the Savannah-Chatham County Health Department conducts about twenty-five clinics. These clinics began about 1916 and were originally initiated by various philanthropic groups. Each group secured the services of a physician, who gave part-time service to the particular clinic sponsored by the group. Sessions of the clinic were usually held once a week. Several years later all clinics of this type were consolidated. In this way the voluntary agencies conducting clinics in Savannah were consolidated under one directing head. The voluntary and official clinics were combined in 1926. About one-third of the physicians in Savannah give a definite amount of their time in the clinics now operated under the direction of the local health department. There are 125 white physicians in the city and county and fifteen Negro physicians. The chief of staff of the clinic is elected by the physicians who work in the clinic. All of the clinics in Savannah were physically moved to the same location in 1941. In some instances the salaries of clinical workers and some of the supplies, such as drugs, bandages and other equipment, are still supported by voluntary groups.

The principal purpose of these clinics under the direction of the local health department is to furnish out-patient care for the indigents. The clinics conducted by the local health department in Savannah include the following fields:

Diabetes	Orthopedics	Dermatology
Genitourinary	Pediatric	Tuberculosis
Cardiac	Proctologic	Prenatal
General medicine	Surgery	Venereal disease
Neurosurgery (epilepsy)	Eye and Ear	Throat
Gynecology	Dental	Mental health

The majority of these clinics have sessions once each week. All told, there are from 35 to 40 clinical sessions a week under the direction of the local health department. The tuberculosis clinic has sessions five times a week.

The admitting clerk of the clinic determines eligibility of patients to receive care. The public health nurse on duty in the clinic concerned is called in for conference in case there is any question as to eligibility of the patient for care.

Also available to provide indigent medical care are three city physicians. These physicians serve on a part-time basis. They conduct general medical clinics for the local health department. They also make house calls when necessary. There is one white city physician and two Negro city physicians. All clinics except those conducted by city physicians are served by public health nurses. The followup of the patient from the various clinics is requested by the clinic public health nurse on a referral slip to the district public health nurse. Public health nurses also refer cases to various clinics as those requiring care come to their attention.

Public health nurses are scheduled from their regular duties in the districts into the clinics for a clinical session once or twice a week depending on the clinical load. Public health nurses also do a certain amount of clinical work in the homes such as the administration of hypodermic medication, bladder irrigations, the administration of various types of treatment except intravenous injections. No charge is made to families for this type of service.

The Savannah-Chatham County Health Department has 39 public health nurses. This includes seven supervising public health nurses and 31 staff nurses. Two of the staff nurses give their entire time to the clinic.

At the present time there is no city or county hospital in Savannah. The medically indigent who require hospital care are therefore referred to various private hospitals in the city. The close coordination between the clinics, operated by the local health department, and the private hospitals has not been developed as effectively as may be desirable.

There is now in process of construction a new 300-bed county hospital in Savannah. Upon the completion of this hospital and the establishment of services to patients, plans will be developed for more effective integration, and the present clinics now under the direction of the local health department can be transferred to and operated as a part of the county hospital.

AUGUSTA AND RICHMOND COUNTY

Public health services were established for the city of Augusta in 1877. A full-time public health program has been maintained jointly by the city of Augusta and Richmond County since 1931. The local health department at Augusta is now housed in a modern health center, recently constructed in the vicinity of the Medical College of Georgia and the teaching hospital. This new center greatly facilitates local health work by bringing together, in one modern building, all official public health activities. The laboratories and public health clinics are newly equipped and are well adapted to their needs.

The existence of a medical school at Augusta for more than 125 years has had a significant influence in the development of the local health services. The presence of a teaching hospital with clinical instructors and medical students has resulted in many coordinated public health activities sponsored jointly by the two agencies. Listed below are some of these coordinated activities:

(1) Six well-baby clinics are held weekly, four of these are in outlying areas. A prenatal clinic is conducted three times weekly. These clinics are staffed by instructors from the medical school for the local health department. Clinical records are kept on forms provided by the local health department. A chest clinic is conducted twice weekly by the local health department. A venereal disease clinic is held three times a week and a food handlers clinic twice weekly. The food handlers clinic has for its chief purpose detection of tuberculosis and venereal disease in food handlers. There is a dental clinic for school children. The work of this clinic is confined to school children of the first grade. A full-time dentist is employed. A mobile unit consisting of a large truck equipped for x-ray and laboratory work is moved from place to place in the city and county where groups of fifty persons or more engaged in various types of food handling are available for examination.

(2) An obstetrical delivery service, developed by the medical school has been in operation for several years. This plan, informally designated as the "Stork Club," operates as follows: when labor begins, the patient, accompanied by her own attendant, is admitted to a delivery room within the medical school. The delivery is performed by the medical student on duty. The mother remains in this building from four to six hours after delivery. She is returned by ambulance to her home. Follow-up on these cases is taken up by the public health nurse of the local health department within 24 hours. The actual obstetrical work is under the direct supervision of the head of the department of obstetrics of the Medical College. Abnormal obstetrical cases and premature infants are admitted immediately to the teaching hospital of the medical school.

(3) The local health department cooperates in the training of medical students. The local health officer is a member of the teaching staff in the public health department of the medical college. Third year medical students are required to take a course in public health. The class is divided into thirds, so that each class has an entire quarter of practical training in public health. Nine students, three days a week, in groups of three, work with the staff of the local health department in the following manner:

(a) Three make home visits with public health nurses.

(b) Three accompany public health engineer or sanitarian on regular visits.

(c) Three observe the various clinics conducted, such as chest clinics, venereal disease clinics, food handlers clinics, and dental clinics for school children.

In this way all third year medical students observe at first hand the details of a public health program in operation. Periods of observation are followed by a conference once a week between the health officer and the students, in which an opportunity is provided for a discussion of the work observed during the week by the students. The following year, these students, as senior medical students, serve as assistants in the various clinics

and clinical conferences held under the auspices of the local health department.

(4) Three months' full-time summer employment is offered by the local health department to six third-year medical students. These students become actual employees of the department and perform whatever tasks are assigned to them. It is made clear to these students that the purpose of this training is not to persuade them to enter the field of public health, although if interested, they will be welcomed into the field. The primary purpose of this temporary employment is to provide the students opportunity to become more familiar with all the phases of public health work so that when they enter the practice of medicine, they will be better practitioners because of this background in preventive medicine.

The medical school, in cooperation with the teaching hospital, offers complete outpatient service for indigent patients thus obviating the necessity for such type out-patient service in the local health department.

SUMMARY

This paper points out health service trends that are taking place in Georgia, more especially the movement toward more integration between public health work and hospital services. Emphasis has been placed on the fact that present day public health activities involve an increasing amount of clinical services and that these required services are best made available through out-patient clinics located in or near hospitals. To avoid useless duplication of expensive equipment, for fuller utilization of scarce hospital beds and health personnel, and to insure satisfactory service to patients, effective coordination must be further developed.

The precise methods of securing this coordination will vary according to local needs and conditions. The program should be voluntary and characterized by considerable variation with respect to the type and extent of services provided, personnel, facilities and funds available. Most important of all, high quality of service to patients must be maintained.

Programs for effective coordination of local health departments and public hospitals is in the early stages of development. By common understanding and careful planning, much progress can still be made, such as:

(1) More extensive utilization of private physicians in preventive medicine.

(2) Coordinated educational programs through hospitals and public health nursing personnel.

(3) Development of means whereby the personnel and facilities of local hospitals will be more fully utilized in the health education work of local public health programs.

(4) Strengthening of the out-patient departments of public hospitals.

The most significant aspect of these health department programs is the fact that despite difficulties and limitations, local health officers have made a real contribution toward improving the health services provided. They have demonstrated that proper organization of personnel, facilities, and services is the key to achieving improved community health service.

DISCUSSION *(Abstract)*

Dr. Clarence L. Guyton, Columbia, S. C.—We have had many examples this morning of efforts to develop newer concepts of public health and teaching it to medical students, or so to speak, processing it through channels. Dr. Williams has brought us down to what we might call the retail outlet of some of these newer concepts of public health and has called our attention to the voluntary cooperative efforts of hospitals and health units, of several Georgia communities, to meet the entire health needs of the citizens. When we think of health in terms of its modern definition, "A state of complete physical, mental and social well-being, not merely the absence of disease or infirmity," we realize that it requires the coordination of all agencies in the community, if we are to attain this goal.

The staffs of the local health unit and hospital are the logical groups to begin this coordination of services. The outpatient department of the hospital is an ideal location for rendering final diagnostic and treatment services, but this must, of course, be supplemented by screening and diagnostic clinics in such locations as conditions require. When we are serving an entire county I think we must not forget that the outpatient clinic of a large hospital at the county seat does not serve the surrounding rural areas to any great extent. All of us in the field realize that there is where the greatest need is for service today. We must keep our screening clinics and other types of health promotion clinics scattered in the field and bring to the outpatient department for definitive diagnosis and treatment those cases that cannot be handled in the field.

As emphasized in the report, each program must

be modified to meet local conditions and resources. It is noted that each of the three programs has as its administrative head a health officer. I am willing to bet that each of them is well trained, experienced and above the average in public health administrative ability. At least it is my opinion that a program will require such an individual if it is to succeed. This health officer, you realize, must coordinate 15 separate sections of medicine, plus the health department staff and other agencies, and when you get all those people coordinated and bring them together and concentrate them on one person you really have a job in public relations. I do not think the average health officer has that ability. I think we must be careful in starting these programs to get a good man to head up each one.

There were two, of course, before the days when we had this broad concept of social, mental and emotional well-being; in those days we were concerned with communicable diseases, such programs in operation in South Carolina during the period 1930-1935. I think these were established on the basis of trying to economize in personnel rather than give a broad service. One was in a large county where the administrative staff consisted of a county health officer, an assistant health officer and a hospital administrator. It operated under a single budget with practically all the funds coming from local sources, but the other was in a small county where the health officer was also the hospital administrator and the laboratory technician in the hospital. This was a small hospital, in a small county. It was only when Federal funds became available under the Social Security Act and we began to receive categorical grants of Federal funds that these units began having separate budgets and these good health officers moved on to greener or at least more lucrative fields.

Dr. Williams has emphasized the importance of prevention, diagnosis, treatment and restoration to health of individuals who have become sick, and the advantages of a combined health unit-hospital program in these activities.

It is believed that the same coordinated program would be most successful in the other phases of a public health program, namely, health promotion and rehabilitation of the handicapped. The first consists of those activities that promote general good health and well-being such as good nutrition, optimum physical and emotional growth, as well as good social adjustment. The second has for its aim the prevention of complete disability and economic dependence and the restoration of maximum physical functional ability. This latter will require the services, not only of the hospital and health center staffs, but require the assistance of the educational department, agricultural and home economic experts, industrialists, as well as community service groups.

The promotion of general good health and well-being in an individual, or group, when each is free of recognizable disease is a difficult and slow process consisting chiefly of health education and motivation of individual responsibility. A person is most amenable to health education when a member of the family, a relative or close friend, is sick. This makes the atmosphere of a hospital or outpatient clinic an ideal place for didactic health teaching. However, this requires a follow-through of clinic, or home demonstration to really educate. Here again the combination of hospital-health unit activities provides the most effective means of obtaining good results.

Dr. T. F. Sellers, Atlanta, Ga.—Dr. Williams has cited and ably presented three situations in Georgia where attempts have been made more or less successfully to bring about coordination of public health and hospital agencies. While each situation was individual in its historical and economic aspects, and differed in approach, all three are significant illustrations of the growing trend of acceptance of the concept that preventive and curative medicine are inseparable in attaining the best in health services for the people. The medical practitioner is beginning to recognize his responsibility in preventive as well as curative medicine and to realize that public health agencies directed by well qualified medical health officers are essential to him in meeting this responsibility. By this same token, the health officer is becoming aware that the field of public health is much broader in scope than the prevention of communicable diseases and sanitation. The people, including government leaders, are cheering on this evaluation with increasing enthusiasm.

Dr. Ben F. Wyman, Columbia, S. C.—I have been very much interested in this. There may be some value in combining the health officer and the hospital administrator, yet I know and you know it is hard enough to get health officers. We wonder whether we should have a lay administrator, in the health department to attend to the business, budgets and other things, the health officer to be more or strictly the medical supervisor, or the administrator from the medical viewpoint. I am in favor of everything Dr. Williams said but I am wondering whether we are going to have the necessary medical men to spread out a little thinner to help in the hospital.

Dr. J. W. R. Norton, Raleigh, N. C.—In North Carolina we have had two individual requests from local communities for the local health officer to become the hospital administrator and both of the requests have been turned down by our board. They were considered individually with the idea that Dr. Wyman just mentioned, that the health officer had all he could do in his public health responsibilities. It was decided that state funds would be withdrawn if the health officer were made the hospital administrator. We also have a rule that where two or more counties are combined under the supervision of a health officer, he will no longer be approved as being a county physician in addition to being county health officer.

Dr. Williams (closing).—In Georgia the coordination of health services between community hospitals and local health agencies has been in the larger cities of the State. This coordination developed because there was need for it in the existing local situations. Incidentally, all four of these health officers are unusually competent administrators. The fact that they

were requested to take over these hospitals or clinics was a compliment to their administrative and managerial ability. All of them have done excellent jobs.

Regarding Dr. Wyman's comment as to whether or not we are spreading our health officers too thin, I might say that the hospitals that are being managed by health officers, of course, have administrative assistants or assistant administrators who do much of the detail work. Incidentally, I should like to mention that here at the Atlanta Division of the University of Georgia there has been developed within the past two years a course of instruction in hospital administration that is being attended by non-medical students. There were 17 students in this group last year and 19 students in the group this year preparing to go out to the smaller hospitals to serve as managers or administrators.

We have not yet come to grips with the problem of how we are going to integrate the hospitals and the public health work in the smaller towns and more rural areas. We are now facing that problem and look forward to seeing what progress we may be able to make during the coming years.

TRAUMATIC PARAPLEGIA*

A CLASSIFICATION AND FIFTEEN-YEAR FOLLOW-UP

By RALPH W. COONRAD, M.D.†
and
EDWARD S. WHITESIDES, M.D.†
Durham, North Carolina

Since World War II a number of optimistic reports have appeared in the literature on the treatment of traumatic paraplegia.[1-4] Many have come from large military or veterans' centers, and have immeasurably advanced our understanding of the paraplegic's problems and demonstrated the value of combined surgical and medical specialty treatment. For many paraplegics this has offered a new way of life. For some, a lack of motivation, and others, the severity of paralysis precludes a good prognosis.

Centers for rehabilitation of the paraplegic are ideal, but are not available for the long term care of most civilian casualties. The medical and economic problem frequently confronts the physician in smaller hospitals and teaching centers and a decision should be made early as to how extensive a rehabilitation program can or should be carried out. The emergency care and ordinary medical treatment requires little judgment on our part. The problem of rehabilitation on the other hand is more complex and requires considerable evaluation before embarking on an extensive, costly and sometimes fruitless program. It is the purpose of this paper, by a comparison follow-up study, to enumerate some of the factors by which the average paraplegic's prognosis can to some extent be predetermined.

Classification.—This study includes a follow-up of 110 paraplegics during the years from 1935 to 1950 at Duke Hospital. More than 70 per cent of this group were treated after the onset of World War II and studies were drawn from 1,380 traumatic fractures of the spine seen during that interval. It was found in evaluating the statistics on these paraplegics that they could be simply classified into two groups, (1) those with a complete lesion in whom there was never any motor or sensory recovery, and (2) those in whom there was a varying degree of return of one or both. For purpose of abbreviation the former will be referred to as the "complete" group and the latter as the "partial" group of paraplegics. The study includes 50 complete paraplegics of whom 38 survived more than two years and 60 partial paraplegics of whom 54 survived more than a two-year period. An evaluation was made of the two groups of patients in respect to ten problems common to all paraplegics.

Mechanism of Injury.—Although the numerical series in this study is small, statistically there is a significant difference in the type of injury sustained by the majority of each of the two groups of patients. Seventy per cent of the 60 partial paraplegics were injured in falls, several from heights above 100 feet and two from 120 feet, whereas only six per cent of the complete group of 50 paraplegics were injured by falling. In contrast, 40 per cent of the complete group were injured in auto accidents where only 11 per cent of the partial group were thus injured. Further evaluation revealed that half of the partial paraplegics injured in auto accidents were thrown clear of the automobile where only one-fifth of the complete group were thrown clear. This would suggest that an individual has a better chance of having a

---

*Read in Section on Orthopedic and Traumatic Surgery, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

*From the Department of Orthopedics, Duke University School of Medicine, Durham, North Carolina.

†Fellow, National Foundation for Infantile Paralysis.

partial paraplegia if injured in a fall or if thrown clear in an automobile accident *(Table 1)*.

Hospitalization.—There is a wide variation in the hospitalization periods for the two groups evaluated in this study. The partial paraplegics had an average hospitalization period of 143 days for a total of 54 patients whose records could be satisfactorily totaled. The complete group averaged 482 days for 38 patients, with five patients in this group totalling over 1,000 hospital days. This aspect of the problem becomes important for those who must undertake the financial burden once the problem of rehabilitation is initiated. It is well known that amounts ranging from $35,000 to $65,000 are set aside by insurance carriers for industrial accidents resulting in paraplegia.

Longevity.—The partial paraplegic appears to have a better prognosis for longevity according to this study. Ninety per cent of the partial paraplegics lived longer than two years and 54 or 90 per cent are living at the time of this writing. Seventy-six per cent of the complete group lived more than two years and 34 or 66 per cent of the 50 patients are still living. It must be remembered that these figures are inclusive of civilian casualties of all ages and during the years prior to the use of antibiotic agents.

Ambulation.—Not all paraplegics have the same potentialities for ambulation. The level of lesion, age and physical build of the patient, severity of initial trauma, physical condition and reserve, motivation, and whether the lesion is partial or complete are all primary factors affecting ambulatory prognosis. Functional ambulation, as it will be referred to hereafter, is defined as unassisted, unlimited walking with or without apparatus such as crutches, canes, braces, or corset.

Functional ambulation for the patient with a complete lesion above T10 or T11 becomes impractical in most instances because the quadratus lumborum and lower abdominal musculature is supplied by the lower dorsal and upper two lumbar nerves. Most of these patients should early be considered wheelchair problems.

For the patient with a lesion from T10 to L1, ambulation consists of taking a few steps with braces and crutches and an occasional patient will be able consistently to use a "swing-through" type of gait. All ambulation at this level requires a maximum amount of effort and the patient often needs assistance in leaving and recovering his wheel chair. With a level of L3 and below, functional ambulation is practical and should be encouraged. Some patients with partial lesions do well with two canes where there is stability remaining about the hips and knees.

There is a definite difference in ambulatory prognosis shown by the two groups in this study. Thirty-two or 50.3 per cent of the 60 partial paraplegics became and have remained functionally ambulatory. Only three or seven per cent of the complete group of 50 paraplegics became and remained functionally ambulatory. It should be mentioned, however, that standing and taking a few steps with as much assistance as is necessary, is important for all paraplegics, to help combat osteoporosis, calcinuria, decubiti, and for the general and metabolic well-being of the patient. Thus the fitting of braces, crutches, corset or back support for patients who cannot hope to walk, may be indicated where enough motivation exists to make the expenditure worth while. It is interesting to note in this study that of 21 complete paraplegics fitted with braces and crutches who lived more than two years, only eight used this apparatus after leaving the hospital and all eight had lesions below T10. Of the remaining 13 given apparatus but not using it, 10 had lesions below T10 and three above. In one instance a patient with a complete lesion at the level of T5 was given 180 days of gait training at Duke Hospital and an additional 180 days of gait training in a New York hospital only to return home as a wheel chair patient and make no further attempt at ambulation. Such a patient should have been considered a wheel chair problem initially. Similarly, patients over 50 years

MECHANISM OF INJURY

Partial paraplegia	
70 per cent by falls	
11 per cent in auto accidents	
Complete paraplegia	
6 per cent by falls	
40 per cent in auto accidents	

TABLE 1

of age with complete lesions above the third lumbar should only under exceptional motivation and physical conditioning be considered for ambulatory rehabilitation.

In planning ambulatory rehabilitation, each paraplegic must be considered an individual problem. A complete muscle evaluation is necessary in the partial group to determine what groups need further strengthening by resistive exercise. When a plateau is reached in neurological return, orthopedic reconstructive procedures may be indicated about the lower extremity by tendon transfer, stabilization, and so on to rid the patient of a brace. The part played by the physical therapist in ambulatory training and conditioning cannot be overemphasized. The therapist has daily contact with the patient, and the opportunity of guiding, encouraging and assisting the paraplegic from one goal to the next. His approach to the patient can spell success or disaster. *(Tables 2, 3* and *4.)*

Spasticity.—Spasticity can contribute to severe deformity and prohibit ambulation when severe. There is nothing to be gained by fighting or working against it, and consideration should be given early toward relieving if for no other reason than for the comfort or care of the patient. Tenotomy[5] of the adductors, iliopsoas and where necessary the rectus femoris and sartorius, for severe hip flexor spasm may be used. Hamstring tenotomy may be indicated for the patient with persistent flexion at the knee. Extrapelvic obturator neurectomy can be carried out where adductor tenotomy is insufficient. A less selective release of spasticity by rhizotomy can be carried out by the neurosurgeon.[6] Subarachnoid injection of alcohol into the lumbar cistern has been reported by Stellars,[7] Bors,[8] and others,[9 10] with good results in those patients who have no residual motor function, have stationary lesions and in whom spasm is severe enough to interfere with the patients' comfort.

In this study significant spasticity was noted in 14 patients or 22 per cent of the partial group living more than two years. Only four of these or six per cent had sufficient spasticity to inhibit ambulation. All four were improved by peripheral neurectomies and tenotomies in the lower extremities, but only two are now ambulatory.

Functional Independence.—There is a distinct difference in the degree of functional independence found in the two groups of paraplegics in this study, that is, getting in and out of a wheel chair from bed, assuming a standing position without assistance, getting in and out of an automobile, and so on. Of

AMBULATION
Partial paraplegia
50.3 per cent became and remained functionally ambulatory
Complete paraplegia
7 per cent became and remained functionally ambulatory

TABLE 2

PARTIAL PARAPLEGIA
(Tabulated from 54 Patients Living More Than Two Years)

Level of Lesion	Number of Patients	Number Becoming Ambulatory	Number Given Gait Training
T1	1		
T2	1	1	
T4	2		1
T5	1	1	1
T7	1	1	
T8	3	1	1
T10	1	1	
T11	4	3	1
T12	5	4	2
L1	25	17	8
L2	4	2	1
L3	2	1	1
L4	3	1	2
L5	1		
Total	54	32	18

TABLE 3

PARTIAL PARAPLEGIA
(Tabulated from 38 Patients Living More Than Two Years)

Level of Lesion	Number of Patients	Number Becoming Ambulatory	Number Given Gait Training
T1	1		
T2	1		
T4	1		
T5	2		1
T8	5		2
T9	1		1
T10	5		1
T11	5	1	1
T12	9	2	4
L1	7	2	3
L2	1		1
Total	38	5	14

TABLE 4

the group of 50 complete paraplegics, only 16 per cent ever became entirely independent functionally. Twenty-four per cent needed partial assistance, and 60 per cent were found totally dependent. Of the group of 60 partial paraplegics, 77 per cent became and remained independent, 10 per cent needed partial daily assistance, and 13 per cent were completely dependent *(Table 5)*.

Bladder Function.—Immediately after spinal cord injury the bladder becomes atonic. If the lesion does not directly or indirectly involve the sacral cord (S2, 3, 4) one may hope for establishment of an automatic bladder. With complete transection of the cord, this is the highest degree of bladder function one can expect. With partial paraplegia, return of normal bladder function is sometimes possible. In some cases, with development of mass reflexes, the bladder may degenerate into a hypertonic, functionally unsatisfactory organ. In the presence of infection, decubiti or other physiological setbacks, the bladder may resume a more atonic state. In many cases, therefore, the maintenance of an automatic (reflex) bladder is precarious.

Cauda equina or conus lesions presuppose against the development of an automatic bladder because the sacral reflex arc has been abolished. Transurethral resection, pudendal nerve section, and so on, have been advised to reduce the resistance to the urinary stream in such cases.

Immediately after injury, if the patient is unable to void, an indwelling catheter should be allowed to remain in place. Intermittent catheter drainage is not satisfactory. The bladder may be kept in a physiologic state by repeated distention (200-300 cc.) twice daily, using a closed system of irrigation. At the time of weekly catheter change the bladder should be filled with a known amount of fluid, the catheter removed and the voided volume noted. With the disappearance of spinal shock the bladder will resume tone. When the residual urine is less than two ounces, the patient may be tried without catheter drainage. The ultimate objective in neurogenic disease of the bladder is preservation of urinary function.

In this study, 15 or 39 per cent of the 38 complete paraplegias who lived more than two years were able to develop automatic bladder function with training. There were 14 who continued to use retention catheters, six who used continuous portable urinals and three used penile clamps. In the partial paraplegic group of 54 patients who lived more than two years there were 26 or 48 per cent who had a return of normal bladder function. Of the remainder, 20 patients developed an automatic bladder of satisfactory but less than normal function. There were eight patients who continued to use portable urinals or catheters. Thus 85 per cent of the group of partial paraplegics developed satisfactory bladder function in contrast to 39 per cent in the complete group *(Tables 6 and 7)*.

Decubitus Ulcers.—Decubiti together with bladder complications are the greatest restrictions to the paraplegic timetable in planning a rehabilitation program. Prevention of decubiti is always the best cure. Many factors contribute to the development of decubitus ulcers: anemia, hypoproteine-

FUNCTIONAL INDEPENDENCE

Partial paraplegia (60 patients)	
77 per cent have become functionally independent	
10 per cent need partial daily assistance	
Complete paraplegia (50 patients)	
16 per cent have become functionally independent	
24 per cent need partial daily assistance	
Per Cent Given Functional Training	
Partial paraplegia, 30 per cent	
Complete paraplegia, 28 per cent	

TABLE 5

BLADDER FUNCTION ACCORDING TO LEVEL OF LESION
(Partial Paraplegia)

Level of Lesion	Normal Bladder	Automatic Bladder	Catheter	Urinal	Penile Clamp
T3	1				
T4	1				
T5	1				
T7	1		1		
T8	1	3			
T10				1	
T11	2	1			
T12	1	1	1	2	
L1	14	10	2		
L2	2	2	1		
L3	1	1			
L4	1	2			
Total	26	20	5	3	

TABLE 6

mia, recurrent infections, generalized disuse atrophy and pressure. Once developed, from poor nursing care, lack of patient motivation or lack of instruction to the patient, decubiti must be treated before the remaining program can be initiated. Complete excision of the ulcer and regional scar tissue together with any underlying bony prominence such as the ischium, trochanter, or portion of the sacrum, is necessary before coverage with a full thickness skin flap. Split thickness grafts can be used to cover donor areas but are never indicated over pressure areas for coverage of decubitus ulcers. When complications of osteomyelitis, joint infection or extensive soft tissue infection are present in an extremity, amputation is indicated. The use of a Stryker frame, care of the skin, avoidance of prolonged pressure, attention to diet and blood hemoglobin levels all should have their place in prevention and treatment. Testosterone propionate as described by Cooper[11] as a nitrogen sparing agent has been used in our hands with some apparent success. As an anticatabolic agent this substance diminishes urinary excretion of nitrogen and creatine and tends toward a more favorable status of nitrogen balance.

In this study, 16 per cent of the partial paraplegics gave a history of decubitus ulcers. Only 3 per cent had decubiti at the time of this survey. Of the complete paraplegics, 86 per cent gave a history of having had decubiti and 56 per cent still had decubiti at the time of this study *(Table 8)*.

Vocational Rehabilitation.—In this study the partial paraplegics and those with a lower level of spinal injury have a better prognosis for vocational rehabilitation. The factor of motivation is perhaps greater than any other in determining what goal can be reached. Manson[12] suggests that a rehabilitation program be supplemented early with vocational counseling and where possible training for employment. This should offer the individual a greater sense of security and independence and should facilitate rehabilitation.

There is a difference in vocational achievement in the two groups contrasted in this study. Only two of the 38 complete paraplegics who lived more than two years were found to be self-supporting. There was only one out of five of these patients given vocational training for a six-month period who used the training. Of the group of 54 partial paraplegics who lived more than two years, 16 were found to be self-supporting and 15 partially self-supporting *(Table 9)*.

Motivation.—Although the ability to ambulate, regain functional, economic and social independence by rehabilitative means depends to a great degree on the level of lesion, extent of paralysis and age of the patient, motivation is a basic factor without which no rehabilitative program should be considered. Irreversible, sudden and complete physical defection affects the human personality to a varied extent and does not lend itself well to either technical or psychiatric rehabilitation. A person with little motivation prior to becoming paraplegic does not always develop more motivation afterward. Too little attention is directed toward this all important

BLADDER FUNCTION ACCORDING TO LEVEL OF LESION

(Complete Paraplegia)

Level of Lesion	Normal Bladder	Automatic Bladder	Catheter	Urinal	Penile Clamp
T4			1		
T5		2		1	
T8		1	1	2	
T10		2	5	3	
T11		1	4		
T12		4	2		1
L1		4	1		1
L3		1			1
Total		15	14	6	3

TABLE 7

DECUBITUS ULCERS

Partial paraplegia (60 patients)
16 per cent had decubiti at some time
3 per cent had decubiti at time of survey (54 living)

Complete paraplegia (50 patients)
86 per cent had decubiti at some time
56 per cent had decubiti at time of survey (38 living)

TABLE 8

VOCATIONAL REHABILITATION

Partial paraplegia (54 patients living more than 2 years)
29 per cent self-supporting
27 per cent partially self-supporting

Complete paraplegia (38 patients living more than 2 years)
5 per cent self-supporting
5 per cent partially self-supporting

TABLE 9

factor in planning the rehabilitation program for many severely involved paraplegics. It should be a primary consideration. Without it any efforts directed toward physical conditioning for ambulation, surgical efforts for the correction of deformities, spasticity, or decubitus and vocational and functional instruction for social and economic independence, become totally obviated. With considerable motivation on the other hand, a poor candidate for physical reasons becomes a better risk from every standpoint.

SUMMARY

(1) Not all paraplegics have the same potentialities for ambulation, physical, functional or vocational rehabilitation.

(2) Paraplegia, by this study, can be distinctly classified into two groups: those with complete loss of motor and sensory function below the level of lesion, and those with partial return.

(3) Prognosis for longevity, ambulation, satisfactory bladder function, functional and vocational rehabilitation is considerably better in the partial paraplegic.

(4) In this study 70 per cent of the partial paraplegics were injured in falls, 11 per cent in auto accidents. Only six per cent of the complete paraplegics were injured in falls, but 40 per cent in auto accidents.

(5) Partial paraplegics have a significantly lower incidence of decubitus ulcers and require less hospitalization.

(6) Motivation is a large determining factor in planning any rehabilitation program or considering reconstructive surgery for the paraplegic.

BIBLIOGRAPHY

1. Munro, D. Two Year End Results in Total Rehabilitation of Veterans with Spinal Cord and Cauda Equina Injuries. New Eng. J. of Med., **242**:1-16, 1950.
2. Munro, D.: Rehabilitation of Veterans Paralyzed As a Result of Injury to Spinal Cord and Cauda Equina. Amer. J. Surg., **75**:3-18, 1949.
3. Street, D. M.: Treatment and Rehabilitation of the Paraplegic. Amer. J. Surg., **80**:722, 1950.
4. Alexander, E.: Treatment of Traumatic Paraplegia. North Carolina Med. J., **14**:32-34, 1953.
5. Peterson, L. T.: Tenotomy in the Treatment of Spastic Paraplegia. J. Bone and Joint Surg., **32A**:875-886, 1950.
6. Fresch, J. D.: Neurosurgery in the Rehabilitation of Paraplegia. J.A.M.A., **146**:223, 1951.
7. Stellars, S.: Subarachnoid Injection of Alcohol in Treatment of Spasticity in Paraplegia. A.M.A. Arch. Neurol. & Psychiat., **69**:343-349, 1953.
8. Bors, E.; and Sheldon, C. H.: Subarachnoid Alcohol Block in Paraplegia: Its Beneficial Effect on Mass Reflexes and Bladder Dysfunction. J. Neurosurg., **6**:385 (July) 1948.
9. Cooper, I. S.; and Hoen, T. I.: Intrathecal Alcohol in the Treatment of Spastic Paraplegia. J. Neurosurg., **6**:187 (May) 1949.
10. Boucher, R.: De l'injection intrarachidienne d'alcool absolu dans les cas de parapl'egie spasmodique. Bull. Acad. Mat. Med., **132**:362, 1948.
11. Cooper, I. S.; Rynearson, E. H.; McCarty, C. S.; and Power, M. H.: Testosterone Propionate As a Nitrogen Sparing Agent After Spinal Cord Injury. J.A.M.A., **145**: 549, 1951.
12. Manson, M. P.: Rehabilitation of Paraplegics. A.M.A. Arch. Neurol. & Psychiat., **65**:34-38, 1951.

DISCUSSION *(Abstract)*

Dr. Paul L. Reith, Atlanta, Ga.—This is a rather depressing paper, to find that only one out of 20 complete paraplegics can become partially self-supporting. It is an honest paper and the facts are important to us as regards prognosis in paraplegics. This paper is especially important to people in the field of vocational rehabilitation.

It was depressing to learn that if I have a patient with a complete lesion above the tenth thoracic level I may as well tell that patient that she will be confined to a wheel chair; that her chances of ambulation are very poor. However, it is well that we have these facts and face them honestly. It certainly can save time and money.

It is not surprising to learn that in the more severely involved cases and in those with poor motivation the prognosis is poor. Certainly that principle would stand good in most any type of orthopedic case, say, the arthritic or other type that needs to be rehabilitated.

In going over this paper one tries to think of how he can better the situation; what can be done to improve this rather depressing picture. One might: (1) stay out of automobiles, (2) review first aid measures and try to teach those first aid measures which will prevent a minor spinal injury from becoming a serious one, and (3) perhaps there should be more vigorous treatment of the injured soon after they are admitted to the hospital. In this regard I think the paper that was given in London, England summer before last on the vigorous treatment of severe fractures with cord injury is of value. They are treating vertebral fractures quite well by open reduction and insertion of temporary plates in an effort to realign all fragments. (4) Lastly, what can be done about the motivation problem? This involves not only the doctor but many other workers.

Dr. J. A. Conroy, Nashville, Tenn.—Since the return of the bladder function is poor in the total paraplegic would it not be better to use suprapubic cystostomy?

Dr. William M. Deyerle, Richmond, Va.—I think if more persons had access to this very honest paper, particularly the physiatrists, there would be less wasted time and fewer false hopes built up in patients.

I should like to ask whether any of the patients requested amputation, or whether it was done on any of them. We have had three that I know of who finally had amputation and continued to be self-supporting following the amputation.

Dr. Harriet E. Gillette, Atlanta, Ga.—I have certainly enjoyed the facts and figures presented. We are spending a great deal too much money on persons who are not going to prove worthy of the investment.

Dr. Coonrad (closing).—I am not qualified to discuss the suprapubic cyctostomy. I think if other means fail the purpose of supplying adequate urinary drainage it may be indicated.

I know of none in these groups who have requested amputation. However, I did not see all of the patients at the time they were originally admitted to the hospital or on all of their revisits. There was one patient on whom an amputation was done in the complete group. That patient is still completely dependent, and a bedridden problem.

PRIMARY CARCINOMA OF THE VAGINA*

By LEONARD PALUMBO, JR., M.D.
Chapel Hill, North Carolina

One hundred and twenty-six years have elapsed since 1827, when Cruveilhier[11] first described primary carcinoma of the vagina before the Anatomical Society of Paris.

A survey of the literature reveals that the number of patients reported by any single clinic or observer has been small, and that this rare lesion is usually given brief consideration and dismissal as a malignancy which is unfavorably influenced by treatment and notoriously ominous in prognosis. It is generally accepted that a high cure rate can be achieved in most of the cancers of the female reproductive tract that produce relatively early symptoms of their presence. Primary carcinoma of the vagina, however, is the exception.

Confirmation of the generally poor prognosis is reflected in the results of various authors which have been collected from the literature and presented in *Table 1*. One finds little consolation in comparing the results of even recently published series with those of 20 years ago. The results of a compiled series of 970 patients collected from the world literature by Livingstone[21] in 1947 revealed a five-year salvage of only 12.3 per cent.

Incidence.—Primary carcinoma of the vagina constitutes an insignificant percentage of all cancer in the female and is generally quoted as accounting for about one per cent of all female genital cancer, with extremes in various series of 0.4 to 2.6 per cent.

Age.—Most of the larger series quote an average age of 55 years, and a distribution of patients in various reported groups by age according to 10-year periods, of 50 to 60 years.

Five primary carcinomas of the vagina have been reported in infants between the ages of 8 and 21 months,[1 15 17 22 25] and six in patients between the ages of 14 to 20 years.[2 3 5 31 36]

Three specific primary carcinomas of the vagina concomitant with pregnancy have been reported.[2 3 35]

Symptomatology.—The majority of patients complains initially of intermittent painless vaginal bleeding or leukorrhea. For the most part symptoms are produced by sloughing or bleeding from the tumor itself. Less frequent symptoms include pelvic pain, dysuria, pruritus, presence of a vaginal mass, and urinary incontinence.

Many series report average periods of six to nine months between the onset of symptoms and the initial physical examination.

Pathologic and Histologic Aspects.—Healy[14] has proposed a useful classification of primary vaginal carcinoma in which these tumors are divided into three groups according to the gross appearance. The first group involves the spongy, friable, and highly vascular, fungating tumors. The second group is

FIVE-YEAR RESULTS OF VARIOUS AUTHORS

Author	No. of Patients	Five-Year Results Per Cent
Scholten and Voltz, 1925[29]	80	1.2
Wolf, 1929[39]	40	2.5
Schreiner, 1929[30]	19	5.3
de Buben, 1931[7]	29	6.9
Philipp, 1932[26]	83	15.7
Healy, 1933[14]	99	21.2
Masson, 1934[23]	80	22.5
Taussig, 1935[34]	27	7.4
den Hoed, 1936[10]	31	9.7
Berven & Heyman[4]	58	10.3
Smith, 1940[32]	57	12.2
Livingstone, 1947[21]	76	10.5
Huber, 1950[15]	104	17
Singh, 1951[32]	19	0
Kaiser, 1952[20]	34	15
Compiled Series (Livingstone's)[21]	970	12.3

TABLE 1

*Read in Section on Gynecology, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

*From the Department of Obstetrics and Gynecology, University of North Carolina School of Medicine, Chapel Hill.

made up of the infiltrating, circumscribed, resistant tumors which usually develop an ulcerated surface. The third and smallest group includes the annular constricting forms of carcinoma which convert the vagina into a rigid tube.

Histopathologically, 90 to 97 per cent of all primary carcinomas of the vagina are of the epidermoid or squamous type. Some of these tumors show keratinization and a tendency to pearl formation, but the majority appears moderately to highly undifferentiated.

Primary adenocarcinoma of the vagina is rare, and the source of origin has given rise to much speculation.[27]

When the diagnosis of adenocarcinoma in the vagina is made, the possibility of a metastatic lesion from the endometrium, endocervix, ovary, or bowel should be excluded.

Location of the Neoplasm.—Although primary carcinoma of the vagina does not restrict itself to one wall or another, and although the extensiveness of the process may hopelessly obscure the point of origin, the most common single location is reported to be the upper one-third of the posterior wall. Some portion of the posterior vaginal wall is involved in from 50 to 65 per cent of all patients. Tumors involving only the lower one-third of the posterior wall or the upper one-third of the anterior wall are uncommon.

Characteristics of Extension.—Spread of the malignant process may be by direct continuity with the primary site or by distant metastases. The extension of the growth is initially superficial and usually upwards toward the cervix. Extension to the vulva is much less frequent.

Rectovaginal fistulas occur as late manifestations of the disease; vesicovaginal fistulas are rare.

The rich lymphatic drainage of the vagina, which has been very clearly described by Rouviere,[28] accounts for the diversity of lymphatic metastases. If the lesion lies in the upper two-thirds of the vagina, extension of the disease follows somewhat the same pathway as in cancer of the cervix, with metastases disseminating to the parametrial, iliac and hypogastric nodes. Later, involvement of the obturator, lumbar and sacral nodes may occur. If the lower one-third of the vagina is involved, metastases occur to the femoral and inguinal nodes, as well as to the obturator nodes. Stanley Way[38] points out that the lymphatics from the middle one-third may drain in either direction and that there is a fine anastomosis between the lymphatics of the upper and lower halves of the vagina, as well as between those of the right and left sides. It has been demonstrated that inguinal nodes may be involved when the tumor is located in any portion of the lower two-thirds of the vagina, and that vulvar involvement need not necessarily be present before inguinal node metastases occur.

Recent Results.—An analysis of recently published salvage rates in primary carcinoma of the vagina reveals that the results of therapy, with few exceptions, still leave much to be desired. The material compiled in *Table 2*, with the exception of isolated case reports, represents most of the series which have been reported from the larger clinics throughout the world since Livingstone's monograph was published in 1950. Although the results in several clinics are excellent, the five-year salvage rate in the entire group of 361 patients who could be evaluated was but 21.6 per cent. Similar results were attained by several workers over 20 years ago.

As yet, no recent large series of patients with primary carcinoma of the vagina, treated by ultra-radical operation, has been reported.

Cytologic Studies in Primary Carcinoma of the Vagina.—In addition to the above series, a group of 13 patients with primary carci-

SERIES PUBLISHED SINCE LIVINGSTONE'S MONOGRAPH (1947)

Author	No. of Patients	Five-Year Salvage: Reportable Patients	Five-Year Salvage: Patients Alive	Five-Year Salvage: Per Cent
Kahanpaa and Gylling, 1949[19]	39	24	12	50
Huber, 1950[18]	152	104	18	17
Fricke, 1950[13]	50	32	10	31
Way, 1948[37]	44	33	6	18.2
Singh, 1951[32]	21	19	0	0
Buschke and Cantril, 1951[5]	10			
Kaiser, 1952[20]	55	34	5	15
Messelt, 1952[21]	78	75	17	23
Bivens, 1953[3]	46	40	11	27.5
Totals	495	361	79	21.6
Compiled Series (Livingstone's, 1947)[21]		970	119	12.3

TABLE 2

noma of the vagina, studied in conjunction with genital cytology smears has been reported by Cuyler, Kaufmann, Carter, and Palumbo.[12] These tumors occurred in 24,095 women, seen between January 1, 1947, through April, 1952, who sought gynecologic or obstetric consultation, and from whom genital smears were obtained. This series is interjected because it is the only group of patients with carcinoma of the vagina studied by cytologic smears that has been reported.

The 13 patients with primary carcinoma of the vagina represent 1.6 per cent of 804 gynecologic cancers studied by Papanicolaou's technic during this same period of time.

Pertinent data on these 13 patients with respect to age, menstrual status, symptomatology, location of the tumor, histologic description, and cytologic interpretation are presented in *Table 3*. The average age of these patients is 57 years, with a range of 83 to 23 years. The lesion was first diagnosed at the time of delivery in one patient. This represents only the fourth occurrence of primary carcinoma of the vagina complicated by pregnancy that we have been able to find in the literature.

Abnormal vaginal bleeding in varying amounts, reported by nine patients, was the most common significant symptom. The average duration of symptoms was four months, with extremes of five days to 12 months. One

CLINICAL, HISTOLOGIC AND CYTOLOGIC DATA ON 13 PRIMARY VAGINAL CARCINOMAS

No.	Age	Menstrual Status	Symptoms		Location		Histologic Description	Cytologic Description
1	83	Postmenop. 41 yrs.	Mass in vagina	1 yr.	Rt. lateral	Middle ⅓	Differentiated	Sq. cell ca.
2	74	Postmenop. 32 yrs.	Spotting and dysuria	2 mo.	Anterior	Lower ⅓	Undifferentiated	Sq. cell ca. cervix, ? undiff.
3	73	Postmenop. 18 yrs.	Spotting dysuria	2½ mos.	Posterior	Lower ⅗	Differentiated	Sq. cell ca. cervix
4	73	Postmenop. 36 yrs.	Post contact bleeding	3 wks.	Anterior & rt. lateral	Upper ⅗	Intermediate	Sq. cell ca.
5	71	Postmenop. 21 yrs.	Vaginal bleeding	5 days	Left lateral	Upper ⅓	Differentiated	Sq. cell ca.
6	63	Postmenop. 15 yrs.	Lower abdomen pain, pruritus	7 mos.	Anterior	Lower ⅓	Differentiated	Sq. cell ca.
7	53	Postmenop. 2 yrs.	Spotting	3 mos.	Anterior and lt. lateral	Lower ⅓	Undifferentiated	Adenoca. endometrium
8	52	Postmenop. 3 yrs.	Postcoital bleeding	1 mo.	Posterior	Upper ⅓	Undifferentiated	Sq. cell ca. cervix resembles adenoca.
9	50	Regular periodic bleeding	Foul leucorrhea	6 mos.	Posterior	Entire length	Differentiated	Sq. cell ca. ?
10	46	Regular periodic bleeding	Lower abd. pain & bleeding	1 yr.	Anterior & rt. lateral	Entire length	Undifferentiated	Sq. cell ca.
11	42	Surg. menop. 20 yrs. prior	No complaints routine pelvic exam.		Left Lateral	Upper ⅓	Undifferentiated	Adenoca. resembles sq. cell ca.
12	38	Postpartum 3 wks.	Antepartum bleeding	4 mos.	Anterior	Lower ⅓	Undifferentiated	Inflammatory process
13	23	Regular periodic bleeding	Spotting	1 mo.	Posterior	Entire length	Differentiated	No malignant cells recognized on 4 occasions
	Av. age 57	9 menop. 3 cyclic menses 1 post-partum	Abn. bleeding—9 Av. duration of symptoms—4 mos.		Posterior 4 Anterior 3 Lateral 3 Ant. and lateral 3 Lower ⅔-5 Upper ⅔-4 Middle ⅓ 1 Entire 3			Diff. 6 Undiff. 6 Intermed. 1

TABLE 3

patient presented no complaints and the lesion was found on routine pelvic examination.

A single false negative interpretation was made in one patient (patient 12).

The false negative error in this series, then, was 8.4 per cent. This error in studies of squamous cell carcinoma of the cervix during the period covered was 8.1 per cent.

Although the recognition of malignant cells was correct in 91.6 per cent of the patients, it does not imply that the histologic variety or primary site of the cancer was identified with 91.6 per cent accuracy. The tumors in two of the patients were thought to be adenocarcinoma rather than squamous carcinoma.

It has not been possible in these studies to distinguish cell types in smears of primary squamous cell carcinoma of the vagina from those which commonly characterize squamous cell carcinoma primary in the cervix. However, when malignant cells of endocervical origin appear in smears of squamous carcinoma, it is probable that the primary site of the tumor is in the cervix rather than in the vagina.

TREATMENT

A review of treatment as described in recent publications on primary carcinoma of the vagina reveals anything but unanimity of opinion. In several clinics an appraisal of five-year results with radiotherapy has stimulated a renewed interest in the surgical approach to the treatment of carcinoma of the vagina. Livingstone,[21] the majority of whose patients was treated by irradiation with a five-year salvage of 10.5 per cent, expresses the opinion that:

(1) Lesions amenable to surgical removal, irrespective of their site, should be extirpated.
(2) Supplemental radium or x-ray irradiation should be offered to these patients when excision has been questionably complete.
(3) Lesions no longer operable, or associated with conditions which make surgery ill-advised, should be treated by x-ray or radium.

Corscaden[9] expresses essentially the same views.

Radiation Therapy.—While opinion is prevalent that the results from radiotherapy are uniformly poor, there are several series which are noteworthy. These select series are presented in *Table 4*. The excellent three-year results of Buschke and Cantril[8] have been presented also because these results are thought to be significant when one considers that 65 to 85 per cent of patients who do not respond to irradiation therapy will die within two years after treatment, and that freedom from demonstrable pelvic disease after three years is probably sufficient for judging the results of therapy to the pelvis.

Even those favoring the use of radiation therapy in carcinoma of the vagina hold wide differences of opinion concerning the problem of total dosage, technics of application, the protraction and duration of therapy, and sequence of administration. The consensus seems to be, however, that when radiation therapy is indicated, both deep roentgen as well as radium therapy should be employed.

Sequence.—Except in very early lesions, it would seem logical that there are definite advantages in the use of roentgen therapy first and the application of radium later. External radiation will help to control bleeding, increase the cleanliness of the field, and result in a regression of the lesion, which should facilitate the application of radium to the remaining central portion of the tumor. Furthermore, the risk of breakdown of the area, with fistula formation, is minimized if roentgen therapy is given slowly enough to allow for fibroplastic replacement of disintegrating tumor tissue. Finally, the effect of external radiation upon the parametrial areas and the path of lymphatic spread is an important consideration.

Surgery.—When the anatomy and mode of extension of carcinoma of the vagina are con-

RESULTS IN THE USE OF IRRADIATION

Author	Patients Treated	Patients Living	Per Cent Salvage
	Five-Year Results		
Courtial, 1939[10]	22	10	45.5
Kahanpaa and Gylling, 1949[10]	24	12	50
Fricke, 1950[13]	32	10	31
	Three-Year Results		
Courtial[10]	31	16	51.6
Fricke[13]	32	15	47
Buschke and Cantril[8]	10	6	60

TABLE 4

sidered, it is obvious that the surgical approach, if employed, must be a radical approach if an improved cure rate is to be expected. For example, a lesion of the lower third of the posterior vaginal wall may well necessitate a complete colpectomy, radical hysterectomy, pelvic lymphadenectomy, abdominal-perineal resection with removal of the rectum and anus, radical vulvectomy and bilateral groin dissection. The applicability rate of this mutilating type of operation is seriously limited by the ages of many of these patients, as well as by the postoperative complications and mortality. For this reason irradiation therapy continues to offer the main line of attack.

Prognosis.—Way[37] has pointed out that in vaginal carcinoma infiltration of the rectovaginal and vesicovaginal septa may occur at a comparatively early stage because of the thin vaginal walls and their rich lymphatic supply. This infiltration does not necessarily have the same poor prognostic significance that it has in cancer of the cervix, when it is usually associated with extensive involvement of the parametria, and indicates a more advanced stage of the process. For this reason many patients with carcinoma of the vagina have been rejected for treatment who probably would have been amenable to therapy.

DISCUSSION

Our present limited knowledge and inadequate experience make it extremely difficult to crystallize a concise statement or dogmatic opinion regarding treatment of primary carcinoma of the vagina. For obvious reasons it is not possible to say that the treatment should be primarily radiological or primarily surgical. A legitimate question may be raised as to whether radiotherapy, as employed in the past, has had an adequate trial. It is entirely possible that the generally poor results of irradiation reported in the literature can be explained by inadequate dosages, or technics which were not adequately adjusted to the characteristics of the tumor with regard to the potential of lymphatic spread. Certainly, the results of Courtial,[10] Kahanpaa and Gylling,[19] Fricke,[13] and Buschke and Cantril,[8] suggest that improvements in technic and increases in total dosage of x-ray and radium by a prolongation of therapy may produce a higher rate of cure in vaginal cancer than has previously been achieved. The potentialities of the radical surgical approach to carcinoma of the vagina, on the other hand, have not yet been fully explored in the light of our improved surgical technics and newer therapeutic adjuncts.

It is our opinion that the treatment of primary carcinoma of the vagina must be individualized as determined by the factors of age and constitutional status of the patient, as well as by the extensiveness and the location of the lesion.

Advanced age with its concomitant constitutional diseases will immediately eliminate surgery as the primary therapeutic approach in a large percentage of patients. In patients of any age, however, palliative surgical procedures may be indicated in advanced stages of the disease for the relief of pain, or for the diversion of the fecal and urinary passages because of obstruction or fistula formation.

Unfortunately, many lesions are already considered advanced when the patient first presents herself for treatment and are, therefore, not considered amenable to complete surgical removal. It should be emphasized, however, that the actual extensiveness of the malignant process may be considerably less than the clinical appraisal of involvement as determined by palpation. Again it should be mentioned that results have been published which might suggest that clinical evidence of spread, with the exception of discontinuous metastases, may not materially alter prognosis, and that striking improvements following irradiation therapy have been achieved.

The actual location of the lesion in the various portions of the vagina may be a determining factor in the plan of treatment. An analysis of the correlation between salvage and location of the primary lesion reveals a far more favorable prognosis for lesions involving the upper one-third of the posterior vaginal wall than for those involving the anterior or posterior third of the lower vagina. Kaiser,[20] in fact, reported not a single five-year survival with tumors of the anterior vaginal wall or of the lower one-half of the vagina, and Livingstone[21] reports but one five-year survival in 27 patients with lesions of the lower third of the vagina. Fortunately, the malignancy shows a propensity

for the upper one-third of the posterior vaginal wall. An important consideration in prognosis and treatment of lesions of the lower one-third of the vagina is the problem of inguinal node metastases, the incidence of which has been reported as high as 50 per cent. The cure of a significant percentage of patients with lesions of the lower vagina may depend in part on solving the problem of inguinal node metastases. A consideration of the ineffectiveness of irradiation upon the inguinal and deeper nodes in carcinoma of the vulva, and of the marked susceptibility of the vulva to radionecrosis, leads one to the conclusion that the attack upon lesions of the lower one-third of the vagina should be primarily surgical, or certainly surgery in conjunction with irradiation.

It is our impression that results in the treatment of carcinoma of the vagina may be favorably influenced by improvements in irradiation technics as well as by increases in irradiation dosage; and that radiotherapy will continue to constitute the primary therapeutic approach for the majority of patients. On the other hand, treatment of lesions of the lower vagina probably should be primarily surgical, or at least include the surgical approach. The operation would consist of a radical hysterectomy, total colpectomy, radical vulvectomy, radical bilateral pelvic lymphadenectomy, and groin dissection. In addition, the removal of the bladder or rectum, if involved, may be necessary. Even if the primary treatment of lesions of the lower vagina is radiological, it would seem essential that a pelvic lymphadenectomy and groin dissection be performed, since the ineffectiveness of roentgen therapy on these nodes has been demonstrated.

The radical surgical approach in early lesions involving the upper vagina deserves evaluation and should be considered in suitable patients.

It might be well for those of us who are delegated the responsibility of treating this lesion to recall Bonney's[6] recent statement in his essay, "Wertheim's Operation in Retrospect." Until the specific cure for cancer has been found, "surgery, and radiotherapy alike are makeshifts—a humbling thought and one which should discourage the acrimony which has crept into their rival claims."

CONCLUSIONS

A realization of the shockingly low cure rate in primary carcinoma of the vagina has provided stimulus for an intensive effort to identify the factors responsible for the therapeutic inadequacy of the treatment of a lesion anatomically situated close to areas of major success in cancer therapy. Adequate management by radiotherapy presents many obstacles, and will be a difficult exacting procedure not without its serious complications. The complete extirpation of all cancer-involved tissues, on the other hand, creates formidable surgical problems of mutilation and also of mortality. A proper combination of the two approaches may help to eliminate some of the complications and problems of each, and yield results which will be comparable to those achieved in the treatment of other malignant lesions of the female genital tract.

BIBLIOGRAPHY

1. Ascheim: Ztschr. f. Geburtsh. u. Gynak., 1910, **65**:216-218.
2. Baldwin, L. G.: Amer. J. Obst. & Gynec., **21**:728-734, 1931.
3. Barnes, J. J.; Thomas, P. K., Jr.; and West, O. T.: Primary Carcinoma of the Vagina Associated with Pregnancy. Amer. J. Obst. & Gynec., **60**:1382, 1950.
4. Berven, E.; and Heyman, J.: Cited by Courtial, J.
5. Bivens, Melvin D., Primary Carcinoma of the Vagina. Amer. J. Obst. & Gynec., **65**:390-399 (Feb.) 1953.
6. Bonney, V.: Wertheim's Operation in Retrospect. Lancet., **1**:637-639, 1949.
7. de Buben, I.: Radium in the Treatment of Cancer of the Vagina. Surg., Gynec. & Obst., **52**:884-886, 1931.
8. Buschke, F.; and Cantril, S. T.: Radiation Therapy of the Carcinoma of the Vagina. Radiology, **56**:193-201, 1951.
9. Corscaden, James A.: Gynecologic Cancer. New York: Thomas Nelson and Sons, 1951.
10. Courtial, J.: Epitheliomas, primitifs du vagin et radiotherapie. Paris med., **1**:247-252, 1939.
11. Cruveilhier: Varices des veines du ligament rond, simulant une hernie inguinale.—Anomalie remarquable dans la disposition general du peritoine.—Cancer ulcere de la paroi anterieure du vagin et du bas-fond de la vessie.—Col uterin, proeminent, etc. Bull. Soc. anat. de Paris, **2**:199-205, 1827.
12. Cuyler, W. Kenneth; Kaufmann, Louise A.; Palumbo, Leonard; and Carter, Bayard: Cytologic Studies in Malignant Lesions of the Vagina. Surg., Gynec. and Obst., **96**:115-117, 1953.
13. Fricke, R. E.; Bowing, H. H.; and Decker, D. G.: Radium Therapy of Primary Carcinoma and other Malignant Lesions of the Vagina. Amer. J. Roentgenol., **64**:86-93; disc., 93-94, 1950.
14. Healy, W. P.: Amer. J. Obst. & Gynec., **26**:789-803, 1933.
15. Heckford, N.: Trans. Obst. Soc. Lond., **10**:224, 1868.
16. den Hoed, D.: Resultation can de behandeling van kwaadaardige gezwellen van vagina, vulva en erethra. Nederl. tijdschr. v. geneesk., **80**:1804-1812, 1936.
17. Hoge, Randolph H.; and Benn, Vernand, A.: Carcinoma of the Vulva and Vagina in Infancy. Amer. J. Obst. & Gynec., **46**:286-290, 1943.
18. Huber, H.: Das primare Karzinom der Vagina. Geburtsh, u. Frauenh., **10**:879-898, 1950.
19. Kahanpaa, V.; and Gylling, T.: Uber Ergebnisse mit radiologischer Behandlung bei primaren Scheidenkarzinom. Ann. chir. et gynaec. Fenniae, **38** (suppl. 3):164-174, 1949.
20. Kaiser, Irwin H.: Primary Carcinoma of the Vagina. Cancer, **5**:1146-1160, 1952.
21. Livingstone, R. G.: Primary Carcinoma of the Vagina. Springfield, Ill.: Charles C. Thomas, Publisher, 1950.
22. Lovegren, E.: Acta paediat., **10**:371-378, 1931.

23. Masson, J. C.: Carcinoma of the Female Pelvic Organs. Surg., Gynec. & Obst., 58:453-455, 1934.
24. Messelt, Olaf T.: Primary Carcinoma of the Vagina. Surg., Gynec. & Obst., 95:51-58 (July) 1952.
25. Ortmann, K. K.: Ztschr. f. Krebsforsch., 37:283-292. 1932.
26. Philipp, E.: Zentralbl. f. Gynak., 56:931-938, 1932.
27. Plaut, A.; and Dreyfuss, M. L.: Adenosis of the Vagina and Its Relation to Primary Adenocarcinoma of Vagina. Surg., Gynec. & Obst., 71:756-765, 1940.
28. Rouviere, H.: Anatomy of the Human Lymphatic System. A Compendium Translated from the Original "Anatomie des lymphatiques de l'homme" and Rearranged for the Use of Students and Practitioners by M. J. Tobias. Ann Arbor: Edwards Brothers, Inc., 1938.
29. Scholten, G. C. J.; and Voltz, F.: Munchen. med. Wchnschr., 72:6-10, 1925.
30. Schreiner, B. F.: Five Year End-Results of Cancer of Vagina, Vulva, Clitoris and Labia Treated by Irradiation. Radiol. Rev. & Chicago M. Rec., 51:187-190, 1929.
31. Siddall, R.: Vaginal Carcinoma in a Girl of 14 Years. Treated by Radiation. Amer. J. Obst. & Gynec., 57:396, 1949.
32. Singh, B. P.: Primary Carcinoma of the Vagina. Cancer, 4:1073-1083, 1951.
33. Smith, F. R.: Treatment of Carcinoma of the Vagina, in Pack, G. T., and Livingston, E. M.: Treatment of Cancer and Allied Diseases. New York: Paul B. Hoeber, Inc., 1940.
34. Taussig, F. J.: Primary Cancer of the Vulva, Vagina and Female Urethra: Five Year Results. Surg., Gynec. & Obst., 60:477, 1935.
35. Tuft, L.: Arch. Path., 9:654-658, 1930.
36. Ward, G. G.: Amer. J. Obst., 57:728, 1908.
37. Way, S.: Primary Carcinoma of Vagina. J. Obst. & Gynec. Brit. Emp., 55:739, 1948.
38. Way, Stanley: Malignant Disease of the Female Genital Tract. Philadelphia: The Blakiston Company, 1951.
39. Wolf, H.: Statistik der primaren Scheidenkarzinome der Universitats-Frauenklinik Breslau 1918-1927. Inaug.-Diss. Breslau, 1927: Abstr. in Zentralbl. f. Gynak., 55:942-945, 1931.

ACTH AND CORTISONE IN RELATION TO SURGERY AND ANESTHESIA*

By JOHN L. SIMMONS, M.D.
Chapel Hill, North Carolina

With the increasing administration of ACTH and cortisone, it behooves the surgeon and the anesthetist to familiarize themselves with the physiological actions of these hormones and the complications that may result from their administration.

The administration of large amounts of cortisone to patients with intact adrenal glands is ordinarily followed by a definite sodium, chloride and water retention and increased potassium excretion.[1 2] With prolonged administration of cortisone the salt and water retention may decrease, but potassium continues to be excreted, at times in increasing amounts, with hypochloremia, hypokalemia and metabolic alkalosis resulting. These alterations in electrolytes should be watched for regularly with precautions taken to prevent their occurrence. A low-salt diet and supplementary potassium, 1 to 3 grams per day, should always accompany prolonged cortisone therapy. A high potassium intake reduces sodium retention and conversely salt restriction minimizes potassium loss.[3 4 5] Potassium depletion is unusual in the presence of an adequate diet and a daily supplement of 1 to 3 grams of potassium salt. The patient should be weighed daily and if weight gain and edema ensue, salt restriction should be instituted and, if necessary, diuretics given. A basal blood pressure should be taken as the blood pressure may increase, especially in the presence of renal damage.[6 7 8]

Cortisone results in a negative nitrogen balance.[9] The negative nitrogen balance is diminished by the feeding of a high carbohydrate and high protein diet. Also it is felt that some phase of carbohydrate utilization is inhibited with glycosuria and hyperglycemia resulting. This is probably due to a marked degree of insensitivity to insulin. It is the opinion that these diabetic responses are the exception rather than the rule without pre-existing diabetes. There is complete reversal of the diabetes upon discontinuation of cortisone. An initial and periodic urinalysis should be performed. Latent or overt diabetes does not necessarily contraindicate cortisone, but if a marked degree of hyperglycemia develops in addition to glycosuria, insulin therapy should be instituted.

It has been demonstrated that cortisone causes an increase in urinary and fecal output of calcium and phosphorus.[10] Severe osteoporosis may develop in patients long immobilized or in patients in whom mild osteoporosis already exists. A high protein diet and administration of testosterone may at least partially counteract the anti-anabolic effects of cortisone. It has also been demonstrated experimentally that ACTH inhibits the formation and maturation of the callus in fractures and prematurely closes epiphyses.[11]

In experimental wounds cortisone causes a delay in onset of fibroplasia, a delay in vascularization and an abnormal degree of capillary dilatation. In actual practice however, a serious interference with wound healing rarely occurs unless the dosage is high, greater than 150 milligrams per day over a prolonged period. This delayed healing is

*Read in Joint Session, Section on Anesthesiology and Section on Urology, Symposium on "Anesthesiology in Urology," Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

accentuated if the protein intake is inadequate. A growing experience indicates that the large majority of fractures, traumatic wounds and operative incisions heal satisfactorily despite concomitant cortisone therapy. Also cortisone probably has only a slight inhibitory effect in the development of pericardial, pleural,[12] and peritoneal,[13] adhesions. It is suggested that cortisone may have an inhibitory effect on strictures of the ureter and urethra.[14] There is no confirmation of beneficial effects on the viability of skin grafts in patients with severe burns.[15 16]

It has been fairly well documented that prolonged cortisone therapy has resulted in the production of peptic ulceration. It has been demonstrated that cortisone therapy results in an increase in the basal and nocturnal hydrochloric acid secretion, associated with an increase in serum pepsinogen, pepsin content of the gastric juice and an increase in the urinary excretion of uropepsin. Before placing a patient on cortisone it is well to elicit any history of peptic ulcer. Should the patient give a positive ulcer history or develop ulcer pains during cortisone therapy, it should be discontinued immediately.

Cortisone exerts a suppressive effect on the basic processes of inflammation with an overall decrease in local phagocytic activity.[17] The inhibitory effects also affect the systemic manifestations of inflammation with fever and toxemia being depressed while the etiologic agent remains unaffected by the hormone. While the patient is on cortisone therapy, the physician must be on the alert for development of intercurrent infection as the steroids may effectively attenuate the inflammatory manifestations of infection. In the presence of infection or with the development of infection there is no necessity for discontinuing the steroids if the causative organism is known and an effective antibiotic is available. Before commencing cortisone therapy measures should be taken to be sure that the patient does not have pulmonary tuberculosis.

It is known that following administration of ACTH or cortisone the total eosinophil count decreases in a patient with an intact adrenal cortex. The lymphocytes decrease transiently with a gradual return to normal. This eosinophil response has been the basis of the epinephrine and ACTH tests for adrenocortical response. The eosinophil count has been used to determine the status of the adrenal gland during different periods of stress. The four-hour epinephrine test seems to be of little prognostic value in the preoperative patient.[18] The eosinopenia after ACTH and stress seems to be a fairly reliable index of adrenal activation.[19] It should be remembered that eosinophils may fall in response to other agents or to stress without necessarily involving a detectable increase in the rates of adrenal hormone secretions. In the final evaluation of adrenocortical functions, changes in the excretion of urinary steroids should be measured in addition to changes in circulating eosinophils.[20] There is some indication that general anesthesia may inhibit the usual eosinophil response to the stress of surgical procedures.[21]

Cortisone leads to a suppression of endogenous adrenocortical secretions, which is probably secondary to depression of the output of ACTH by the anterior pituitary gland. Indeed, atrophy of the adrenal cortex has been observed after the administration of cortisone.[22 23] When cortisone is then suddenly withdrawn, clinical evidence of adrenal insufficiency may be observed. In addition, a state of relative hypoadrenalism may develop during the course of therapy as a consequence of superimposed stress. It is recommended for a patient who is soon to undergo surgery that the cortisone not be stopped but continued preoperatively, during and postoperatively for several days. It is further recommended that such a patient receive 100 to 200 milligrams of cortisone per day for two to three days before operation and again on the day of operation with a similar schedule continuing two or three days postoperatively after which the dosage should be gradually decreased until it reaches the previously optimal level. In acute emergencies when this schedule cannot be followed, it is recommended that the patient be managed with cortisone, hydrocortisone or adrenalcortical extract intravenously. In those cases in which it may be necessary to discontinue the cortisone preoperatively in elective surgical procedures, it is recommended that the

cortisone be lowered in decrements of 12.5 milligrams over a week or more at the same time prescribing ACTH to stimulate any depression of the adrenal cortex which may have resulted from cortisone therapy.[24]

There are increasing reports of increased incidence of thrombo-embolic phenomena associated with cortisone therapy. The patient should be watched carefully for such complications.

Preoperatively in a properly controlled patient, premedication with the belladonna drugs, morphine, demerol,® and barbiturates appears to be satisfactory and will not cause undue distress if care is taken to administer the minimal amount of premedication needed with over-sedation and anoxia avoided. Such patients, even if adequately controlled, seem to have a diminished range of compensation to stress. Thus it is imperative to avoid anoxia from overdepression and shock which might precipitate adrenal insufficiency. In properly prepared patients there also appears to be little relationship between the anesthetic agent or technic employed and the complications which arise if agents or technics that regularly produce a significant decrease in blood pressure or are associated with anoxia are avoided.[25 26 27]

At the North Carolina Memorial Hospital there have been in the last year seven patients whose treatment with cortisone was associated with one or more of the above complications or who underwent a surgical procedure at the time they were receiving cortisone.

Case 1.—P. G., a 31-year-old white woman, gave a history of having ulcer pains for several months with an exacerbation of the ulcer symptoms while being treated with cortisone for urticaria which followed penicillin therapy.

Case 2.—E. D., a 50-year-old white woman, who had had rheumatoid arthritis for sixteen years was admitted because of abscesses of the left foot and the left knee joint. She had received cortisone for two years. Cortisone was stopped on the fourteenth hospital day because the knee did not improve with repeated aspirations. On the twenty-fourth hospital day she had a toe amputation and a radical drainage of the left knee under general anesthesia and tolerated the procedure well. On the eighth postoperative day an inferior vena caval ligation was carried out because of pulmonary embolism. This procedure was done under general anesthesia and was tolerated quite well. Ten days later she died of sudden respiratory failure. Pulmonary embolism was suspected but not proved as an autopsy was not obtained.

Case 3.—J. B., a 50-year-old white man, entered the hospital with an acute perforated duodenal ulcer. He had had rheumatoid arthritis for two years and had received cortisone intermittently during that period. For three weeks before admission he had received cortisone. For the first time in his life he had been having typical ulcer symptoms for one week. Under general anesthesia his performation was closed and he was discharged on the eighth postoperative day after a completely benign anesthetic and postoperative course.

Case 4.—M. S., a 26-year-old colored woman with idiopathic thrombocytopenia purpura, was admitted for a splenectomy. Five weeks previously she had been treated for eighteen days with cortisone for a bleeding crisis. For four days before the operation she received 300 milligrams of cortisone per day with improvement in the bleeding and clotting time. On the fifth day a splenectomy was performed under general anesthesia. She tolerated this well and was discharged on the eighteenth postoperative day.

Case 5.—W. C., a 79-year-old white man, had had arthritis for three years and had been treated with cortisone for two years. Increasing nervousness and pitting pedal edema had been present for two months. He was continued on cortisone and on the eighth day a transurethral resection was performed under spinal anesthesia. He tolerated the procedure well and left the hospital on the seventh postoperative day.

Case 6.—M. P., a 62-year-old white woman had had rheumatism for 22 years and had been treated with cortisone for three months. She was admitted because of a subtrochanteric fracture of the left femur. In the two months before admission she had developed glycosuria and had gained ten pounds in weight. She was continued on cortisone and on the third hospital day underwent an open nailing of the hip under general anesthesia. She tolerated the procedure well but following a blood transfusion she developed a rash which might be considered unusual for a patient on cortisone therapy. On the sixth postoperative day a wound infection was noted, but it healed with continued cortisone therapy. Cortisone was stopped on the eighth postoperative day and two days later she was discharged from the hospital. Three and a half weeks later she returned to the hospital because of a purulent wound infection. She was markedly dehydrated, semistuporous and febrile. Her electrolytes were normal. She was given supportive therapy and on the fifth hospital day the nail and pin were removed under general anesthesia with the loss of an estimated 500 cc. of blood. At the end of the operation she was in shock and with repeated blood transfusions during the next few days she was maintained in a mild hypotensive state. During this time she was receiving adrenocortical extract. On the third postoperative day cortisone therapy was commenced. Her condition improved markedly until three days later when she

suddenly died. Autopsy showed a myocardial infarction. The adrenal glands were smaller than usual but the microscopic examination has not been completed at this time.

Case 7.—H. V., a 61-year-old white man, had had rheumatoid arthritis for two years and had been on cortisone intermittently during that time. For one year he had had typical ulcer pains and entered the hospital because of gastrointestinal bleeding. A gastrointestinal series revealed an ulcer distal to the pylorus. Because he continued to bleed, a subtotal gastrectomy, vagotomy, gastrojejunostomy and splenectomy were performed under general anesthesia. He tolerated the procedure reasonably well. His postoperative course was marred by delayed wound healing, thrombophlebitis, a septic course and prolonged abdominal distention.

These patients illustrate several of the physiological actions and complications which may follow the administration of the steroid compounds. More important however, such patients should tolerate anesthetic and surgical procedures as well as the normal person. Care should be taken to prevent over premedication. The anesthetic agent and technic employed should avoid anoxia and shock. The surgeon should avoid excessive trauma and hemorrhage. The patient should also be watched closely during the postoperative period with special attention directed toward maintenance of water, electrolyte and nutritional balance. Any suggestion of infection should be quickly appraised and phlebothrombosis and interference with wound healing watched for.

REFERENCES

1. Sprague, R. G., et alii: Observations on Physiologic Effects of Cortisone and ACTH in Man. Arch. Int. Med., **85**:199-258, 1950.
2. Pearson, O. H.; and Eliel, L. P.: Experimental Studies with ACTH and Cortisone in Patients with Neoplastic Disease. Recent Progress in Hormone Research, **6**:373-416, 1951.
3. Liddle, Forsham and Bennett: Quantitative Study of Prevention of ACTH-Induced Sodium Retention by Potassium Salts. J. Clin. Endocrinol. & Metab., **12**:926, 1952.
4. Seldin, D. W.; Welt, L. G.; and Cort, J.: Effect of Pituitary and Adrenal Hormones on Metabolism and Excretion of Potassium. J. Clin. Investigation, **30**:673, 1951.
5. Greenman: Studies of Prevention of Some of Toxic Effects of Prolonged Cortisone and ACTH Therapy. J. Clin. Investigation, **30**:644, 1951.
6. Pearson; Fleming; Pines; and Crvrble: Cortisone in Hypertensive Vascular Disease. J. Clin. Investigation, **29**:739, 1950.
7. Dustan; Corcoran; Taylor; and Page: Cortisone and ACTH in Essential Hypertension: Establishment of Renal Glycosuria. Arch. Int. Med., **87**:627, 1951.
8. Wilkins, L.; Grigler, J.; Silverman, S.; Gardner, L.; and Migeon, C.: Further Studies on the Treatment of Congenital Adrenal Hyperplasia with Cortisone. J. Clin. Endocrinol. and Metab., **12**:1015, 1952.
9. Hoberman, J. D.: Endocrine Regulation of Amino Acid and Protein Metabolism During Fasting. Yale J. Biol. & Med., **22**:341, 1950.
10. Eliel, L. P.; Hellman, L.; Pearson, O. H.; and Katz, B.: Effects of ACTH on Electrolyte Content of Various Body Tissues. In Proceedings of Second ACTH Conference, Vol. L. Philadelphia: The Blakiston Co., 1951.
11. Shepenek: Effect of Endocrine Substances (ACTH and Growth Hormone) on Experimental Fractures. Surg., Gyn., & Obst., **96**:200, 1953.
12. Schazel; Saltzstein; and Johnson: Prevention of Adhesions in Chest and Pericardium by Cortisone. Postgrad. Med. & Surg. Surgical Forum: Am. Coll. Surgeons, 1951.
13. Hubay: Effect of Cortisone on Prevention of Peritoneal Adhesions. Surg., Gyn., & Obst., **96**:65, 1953.
14. Baker: Inhibitory Effect of Cortisone on Strictures of Urological Tract. Surg., Gyn., & Obst., **95**:446, 1952.
15. Cope; Graham; Mixter; and Ball: Threshold of Thermal Trauma and Influence of Adrenal Cortical and Posterior Pituitary Extracts on Capillary and Chemical Changes: Experimental Study. Arch. Surg., **59**:1015, 1949.
16. Baxter; Schiller; Whiteside; Lipshutz; and Straith: Effect of ACTH on Survival of Homografts in Man. Plast. and Reconstruct. Surg., **7**:492, 1951.
17. Germuth; Ottinger; and Ozams: Influence of Cortisone on Evolution of Acute Infection and Development of Immunity. Bull. Johns Hopkins Hosp., **91**:22, 1952.
18. Steele: Prognostic Significance of Epinephrine Test in Preoperative Patients. New England J. Med., **247**:280, 1952.
19. Schoen: An Evaluation of Eosinophile Count in Patients Undergoing Major Surgery. Surg., Gyn., & Obst., **96**:403, 1953.
20. Thorne, G. W.: Pharmacologic Aspects of Adreno-Cortical Steroids and ACTH in Man. New England J. Med., **248**:232, 284, 323, 369, 414, 588, 632, 1953.
21. Traina; Burstein; Ciliberti; and Rovenstine: Pituitary-Adrenal Response to Surgical Trauma and Anesthesia. I. The Eosinopenic Response. Anesthesiology, **14**:449, 1953.
22. O'Donnell; Fajans; and Weinbaum: Human Adrenal Cortex After Administration of ACTH and Cortisone: Morphological Changes. Arch. Int. Med., **88**:28, 1951.
23. Stebbins: Cytochemical Changes in Adrenal Cortex of Rat Following Administration of Cortisone. Federation Proc., **9**:345, 1950.
24. Sayers: Adrenal Cortex and Homeostasis. Physiol. Rev., **30**:241, 1950.
25. Lundy: Cortisone Problems Involving Anesthesia. Anesthesiology, **14**:376, 1953.
26. Patrick: Anesthesia for Patients with Certain Diseases of Endocrine Glands. Surg. Clin. N. A., **32**:1109, 1952.
27. Papper and Cahill: Anesthesia Problems in Hormonal Disorders of Adrenal Gland. J.A.M.A., **148**:174, 1952.

THE TREATMENT OF BENIGN TUMORS OF THE COLON AND RECTUM*

By W. W. GREEN, M.D.
Toledo, Ohio

In recent years a great deal of emphasis has been placed upon the malignant lesions that are encountered in the colon and rectum. The importance of these lesions cannot be denied, but the attention that they have received has obscured the fact that other tumors, some of which may undergo malignant changes, are also found in the terminal portion of the intestinal tract.

Tumors of epithelial origin constitute the large majority of those found in the colon and rectum, and are the ones that are most apt to undergo malignant change. Other lesions of mesenchymal origin occur infrequently and seldom undergo sarcomatous degeneration. However, no surgeon can be competent

*Read in Section on Proctology, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

in the diagnosis and management of both the benign and malignant tumors of the large bowel without a comprehensive knowledge of the various types of lesions he may encounter. The greater part of this presentation will be devoted to a discussion of the benign adenomas that occur in the colon and rectum. However, before considering them some of the other benign tumors encountered in this area will be discussed.

Submucous Lipomas.—Submucous lipomas are not often found in the colon and rectum yet the frequency of their occurrence is second only to the adenomas. The characteristic symptoms resulting from tumors of this type are those of chronic, recurring partial obstruction, intussusception and bleeding. Although these lesions are usually discovered by x-ray studies, the preoperative diagnosis is difficult and differentiation is usually made only after their removal. The most frequent sites of their occurrence are the right colon and sigmoid, and they are rarely found in the rectum. If pedunculated they can be removed by local excision but the usual manner of treatment is resection of the segment of involved bowel. Whether this is done by an obstructive type of resection or followed by primary anastomosis can best be determined at the time of operation.

Benign Rectal Lymphomas.—Interest in the benign lymphomas that are encountered in the rectum has been stimulated by the reports of Hayes and Burr.[1] Tumors of this type rarely produce symptoms and they are usually discovered incidental to careful palpation of the rectal ampulla. The smaller ones are difficult to visualize unless the mucosa is elevated, although it has been my experience to find a slight degree of edema and pallor of the mucosa overlying the tumor. The fact that these benign lymphomas are usually discovered by palpation may explain why most of those reported have been found in the rectal ampulla. It is reasonable to assume that they may also occur elsewhere in the colon but are not discovered because they are difficult to find by visual examination. Although it has not yet been reported in the literature, microscopic examination of a colon resected by McCormick[2] for what had the clinical appearance of a familial multiple polyposis showed that the multiple nodules were not of epithelial origin but were composed of localized areas of lymphoid tissue. Benign lymphomas are best treated by excision although they can be destroyed by electrodesiccation or electrocoagulation when the diagnosis is not in doubt.

Myomas.—Myomas are infrequently encountered in the large bowel but reports of their presence reach the literature from time to time. Most of these have been described as leiomyomas, and their symptoms vary with their size and location. Thiele,[3] in reporting a case in which the tumor had the gross clinical appearance of a papillary adenocarcinoma, emphasized the fact that sudden hemorrhage was sometimes the first symptom produced by tumors of this type. My personal experience has been limited to two cases in which the tumor was discovered by routine digital examination of the rectal ampulla. The clinical diagnosis in both instances was that of a rectal lymphoma and only after the tumors were examined microscopically were they discovered to be leiomyomas. A recent report[4] in the literature cited a case in which a leiomyosarcoma developed at the site where a leiomyoma had been removed two years previously. The preferred method of treatment of the myomas is that of local excision.

Hemangiomas.—Hemangiomas and lymphangiomas of the colon and rectum are extremely rare. Their removal usually requires radical excision and it is essential that the blood supply to the affected segment be readily accessible in order to avoid uncontrollable hemorrhage. My experience with this type of tumor has been limited to a case of cavernous hemangioma involving the upper rectal ampulla. A proctosigmoidectomy with preservation of the sphincter was advised but the patient refused to undergo any surgical procedure.

Fibromas.—Fibromas of the colon and rectum have been reported but my personal experience does not include any cases of this type. These lesions should be excised because the diagnosis is usually in doubt until after the tumor has been removed.

Familial Multiple Polyposis.—Familial multiple polyposis is encountered infrequently but is a condition in which malignant changes can be expected to occur at any time. In three of the four cases that have been under my observation, carcinoma was present at the time of the first examination. Although these pa-

tients do not usually seek the care of a physician until they have reached adult life, the condition is one which is present in childhood. LeFevre and Jacques[5] reported a case in which familial multiple polyposis was discovered in a four-month-old infant. The diagnosis is obvious on sigmoidoscopic examination but, when the polyps are small and sessile, they are sometimes difficult to demonstrate with even the most careful x-ray studies. The one patient of mine who had not already developed a malignancy was aware of her familial background and had been assured at a cancer detection clinic that she had no reason for concern. Her first symptom was that of sudden hemorrhage from the bowel which occurred when she was thirty-five years old. Although many small, sessile polyps 3 to 5 mm. in diameter were seen in the rectum and lower sigmoid on sigmoidoscopic examination, repeated and careful air-contrast x-ray studies of the bowel failed to demonstrate anything but a large polyp in the descending colon.

Because of the potential malignancy of this condition, a colectomy is the only logical method of treatment. Many articles have been published on the condition, and current opinion is about equally divided as to whether a total colectomy or a subtotal colectomy with ileoproctostomy is the preferred form of treatment. If the latter procedure is done, the patient should remain under close observation so that any polyps appearing in the rectal segment can be destroyed. It is my opinion that the choice between a total colectomy and a colectomy with preservation of the rectum should be based upon the various factors present in each individual case.

ADENOMATOUS POLYPS

Symptoms and Diagnosis.—It is now a well accepted fact that there is a close relationship between the benign polyps originating from the mucosa of the large bowel and carcinoma of the colon and rectum. The presence of discrete areas of malignant change in otherwise benign polyps has been demonstrated from time to time. There is also a striking similarity in the areas of the large bowel in which these benign and malignant lesions occur. The majority of them (60-75 per cent depending upon the statistical study which one is willing to accept) occur in the rectum and lower sigmoid. This means that both conditions should be diagnosed early if the examining physician is aware of the possibility of their presence. An encouraging example of what such an awareness can mean is demonstrated in a study by DeMuth, Cherney and Fitts.[6] In reviewing their records they found that the percentage of patients in whom these polyps were discovered was five times as great in 1950 as in 1943. The majority of these lesions are within the range of the sigmoidoscope and many can be discovered by digital examination alone. The situation of most of these tumors, both benign and malignant, favors their early diagnosis and makes them accessible for adequate treatment. By detecting and removing the benign polyp the patient's symptoms are relieved and in an undetermined number of cases the development of a malignant growth has been prevented. The discovery and removal of the benign polyps of the large bowel is probably the most fruitful field in our efforts directed toward the prevention of cancer.

It is not within the scope of this presentation to enter into a lengthy discussion of the symptoms originating from these adenomatous polyps. In an analysis[7] of my cases a few years ago it was found that about half of the polyps (51.5 per cent) were unsuspected from the history but were discovered on routine sigmoidoscopic examination. The intermittent evacuation of blood-tinged mucus, often unassociated with fecal material, is one of the most characteristic symptoms of these tumors. This is often described by the patient as a "diarrhea" but a few well chosen questions will usually clarify this point. Sudden and severe hemorrhage is unusual. However, in three of my patients, all young women, this was the first and only symptom. If the polyp is above the rectum, a significant symptom is that of localized abdominal cramps preceding defecation and relieved by evacuation.

The diagnosis of these polyps can be made by digital examination, sigmoidoscopic examination and careful roentgenologic studies. The first two of these methods are obvious and require no further comment except to point out that it is not the length of the instrument used, but how far it is advanced into the bowel, that is important. X-ray diagnosis presents certain problems, but is essential for the discovery of lesions above the

reach of the sigmoidoscope.[8] Demonstration of polyps by x-ray is often difficult and requires skill, perseverance and experience on the part of the roentgenologist. It is not an uncommon experience to have an x-ray study fail to demonstrate a sizable polyp that was readily found in the sigmoid on previous endoscopic examination. It is unwise to place too much reliance on negative x-ray findings, particularly when the history or the presence of blood above the anal canal leads one to suspect the presence of a lesion beyond the reach of the examining instrument. When the presence of a polyp is suspected and not demonstrated on the initial x-ray examinations, repeated careful studies at two or three-month intervals will usually be rewarded by the final discovery of the tumor. When the roentgenologic diagnosis of a polyp has been made, it is my policy to request verification by another examination before entering the abdomen to remove it.

Treatment (General).—Most surgeons are enthusiastic about some particular technic that has proven to be successful in their hands and a few are apt to be unduly critical of other methods which they have seldom or never employed. There are three accepted methods for the removal of polyps of the large bowel: destruction *in situ*, excision by the snare, and surgical excision. Evaluation of these three methods finds certain points in favor of each and brings out valid objections to the routine use of any one.

Destruction by electrocoagulation or electrodesiccation is a useful form of treatment for those polyps which are within the reach of the examining instrument. This method is the least difficult technically, but does not provide any tissue for microscopic examination. Utilization of this technic may unduly prolong the period of treatment and may, in an occasional case, result in perforation of the bowel.

Excision by the snare, with or without the concomitant use of one of the types of electrical current, should be limited to pedunculated tumors. The employment of this technic is questionable if the tumor is situated above the limits of the scope but has prolapsed into view to make it accessible. Hemorrhage is a theoretical objection to the use of this method of treatment that is usually voiced by those unfamiliar with the technic.

The abdominal approach is necessary for the removal of those polyps above the reach of the sigmoidoscope. Colotomy is also preferable for the excision of those tumors which can be reached by the scope but are so large that visualization of the entire tumor and pedicle is difficult. This method of approach affords the surgeon an opportunity to examine the mesentery adjacent to the tumor and permits ready control of the blood supply of the polyp. A colotomy may be followed by any of the complications inherent in any operation in which the large bowel is opened. However, these complications are almost negligible because of the attention that is now being given to the preoperative and postoperative care of the patient.

Destruction in Situ.—The small sessile polyps frequently discovered on routine sigmoidoscopic examination can best be destroyed *in situ* by electrocoagulation or by the less penetrating electrodesiccating current. These polyps are symptomless and usually measure less than 5 mm. in diameter. Their destruction is a relatively simple procedure that requires merely the contact of the electrode with the lesion that is to be destroyed. It is a procedure that can be safely carried out in the office but wherever it is done the surgeon must be thoroughly familiar with the current he is using. A subsequent examination should be made in three or four weeks to be sure that the tumor has been destroyed and yearly examinations thereafter are justified in order to detect any new lesion that may appear. The employment of this method for the destruction of larger pedunculated polyps is subject to criticism because it does not make the entire tumor available for microscopic examination.

Excision by Snare.—The removal of a pedunculated polyp through the sigmoidoscope by the coagulating snare is a tedious and exacting procedure. Most of the pedunculated tumors lie above the peritoneal reflection and their removal through the sigmoidoscope is best carried out in the hospital. Although perforation is an infrequent complication, the possibility of such an occurrence should be kept in mind and one of the antibiotics should be used for the preoperative prepara-

tion of the bowel. The inverted (Hanes) position is preferable to the jackknife position and should be used if a table is available for this purpose. A scope at least one inch in diameter greatly facilitates the manipulation necessary to grasp and snare the tumor. Except in children, the use of any other than a local anesthetic should be avoided if at all possible. There is less danger of perforation when the patient is conscious of mesenteric pull during manipulation of the sigmoidoscope. The use of mild preoperative sedation and the injection of a local anesthetic to relax the sphincter make the experience less unpleasant for the patient.

After adequate preparation and the injection of the local anesthetic the following steps are carried out: (1) the operating sigmoidoscope is inserted to the level of the highest tumor found previously at the initial examination; (2) a long forceps is passed through the loop of a standard snare to grasp the tumor; (3) the polyp is manipulated so that the pedicle is always in view and the snare loop is placed at its base; (4) as the snare is slowly tightened the coagulating or cutting current is used until the pedicle has been severed; (5) the snare and forceps, containing the tumor, are withdrawn and an area about 1.5 cm. in diameter at the site of the base is coagulated with a current gauged to penetrate to a depth of about 1 mm. In each instance, it is well to test the current before the operation to be sure that the depth of penetration is not excessive. The amount of time that the patient remains in the hospital and that the dietary restrictions are continued is determined by the level at which the tumor was found and by the extent of the destruction of the base.

In instances where the ordinary requirements of safe removal have been met, this procedure is followed in preference to the abdominal approach. The entire tumor can be removed for microscopic examination, the convalescence is rapid and uneventful and the occasional complications subsequent to an abdominal operation where the bowel is opened have been avoided. Subsequent periodic examinations to detect recurrence or the formation of new polyps are essential.

Excision by Colotomy.—The removal of accessible polyps by colotomy is a comparatively simple procedure and a much safer one for the surgeon not accustomed to working through a sigmoidoscope. Inasmuch as the extent of the operative procedure can be determined only after the abdomen has been entered, the preoperative preparation is the same as when a bowel resection is contemplated. The patient is hospitalized from three to five days prior to operation in order that the colon may be properly prepared and the usual blood chemical studies carried out. The bowel is emptied by catharsis and the patient placed on a non-residue diet. It is my custom to administer either one of the insoluble sulfa compounds for four days or neomycin® for thirty-six hours prior to operation. The abdomen is entered over the estimated site of the polyp through any of the standard approaches. Where feasible, the abdomen is explored and the segment of bowel containing the polyp is delivered through the incision. It is sometimes necessary to mobilize the bowel by incising the peritoneum along the line of its lateral reflection. The mesentery adjacent to the site of the polyp is carefully examined to determine the presence or absence of palpable glands. If any glands are detected, or if the polyp proves to be sessile, the entire segment of bowel is removed and a primary anastomosis performed.

By manipulating the polyp upward and downward within the lumen of the bowel the point of attachment of its pedicle can be readily estimated. The rubber covered clamps are applied in the usual manner and the lumen is entered through a longitudinal incision in the amesocolic portion of the bowel. The length of the incision is determined by the size of the polyp and Babcock forceps are applied at the upper and lower pole. If the polyp is found to have a definite pedicle with no clinical evidence of malignant degeneration it is ligated at the base and excised. The pathologists with whom I work do not consider frozen sections a reliable basis for establishing a diagnosis and this procedure is not employed by me at the time of operation. The sigmoidoscope is inserted through the incision to examine the lumen of the bowel in both directions. I feel that this procedure is justified because on occasion I have discovered and destroyed small adenomata which could have been found in no other manner.

The longitudinal incision is closed transversely to minimize stenosis. Two layers of

the interrupted sutures are applied and the choice of material is a matter of individual preference. The loop of bowel is dropped back into the abdomen and drapes and gloves are changed. The abdominal incision can be closed in layers in any manner selected by the surgeon. Gastric suction is employed as a prophylactic measure for at least twenty-four hours after operation and one of the antibiotics is usually administered.

Excision by colotomy is particularly applicable in the removal of large polyps where the base cannot be visualized or where the tumor, although initially discovered through the sigmoidoscope, is attached at a point beyond the reach of the instrument. Where malignancy is suspected from the clinical appearance of the tumor through the sigmoidoscope, this type of operation allows careful inspection of the polyp and its adjacent bowel wall and mesentery. If there is any clinical evidence to suggest that malignant changes have occurred a segmental resection should be done.

Papillary Adenomas.—The treatment of the benign sessile papillary adenomas that occur in the colon and rectum presents a problem somewhat different from the management of pedunculated adenomas. These papillomas have a high malignant potential and should be completely removed whenever feasible.[9] Their nature is such that repeated biopsy specimens will often fail to demonstrate the early malignant changes which have occurred in the deeper areas. When a sessile papillary adenoma is discovered in the large bowel above the rectum the involved segment of the colon should be resected. However, when a similar tumor is situated in the rectum a more conservative procedure is often in the best interests of the patient. The site of the tumor in the rectal ampulla usually determines the operative procedure chosen for its removal. Some of these growths can be prolapsed through the anus and excised and others can be adequately exposed and removed through posterior proctotomy. The large flat papillary adenomas involving a third or more of the rectal ampulla are very difficult to remove by local resection. It is for tumors of this type that a proctosigmoidectomy would probably be the most effective method of treatment. Destruction by electrocoagulation has been advocated for the removal of this type of tumor and I have employed this method of treatment on several occasions. Recurrence following this procedure is frequently encountered and necessitates repeated observation and treatment. Although it has not been my experience to observe a malignancy to develop in any patient so treated, I am convinced that destruction by electrocoagulation is an unsatisfactory form of treatment for large, sessile papillary adenomas.

CONCLUSION

Many of the benign tumors encountered in the colon and rectum may undergo malignant change. The exact nature of some of these lesions is determined only by microscopic examination. For these reasons the only adequate method of treatment is by surgical removal. The nature of the tumor and its location are the determining factors in the selection of the surgical procedure best suited to the individual case. No one method of treatment is applicable to all of these lesions. Destruction by electrodesiccation and electrocoagulation is a useful form of treatment for certain types of adenomatous polyps provided that the surgeon is thoroughly familiar with the current which he is employing. Local excision is adequate for the majority of the benign tumors of the large bowel. Resection of the involved segment of the colon is not a hazardous procedure and should be employed whenever there is any doubt in the mind of the surgeon as to whether or not malignant changes have occurred. The majority of the benign tumors of the large bowel are situated in an area accessible to the sigmoidoscope. Whenever feasible, repeated examinations should be made periodically in order to detect a recurrence or the development of another lesion. No efforts directed toward the prevention of cancer are more highly rewarding than the discovery and removal of the benign tumors that are encountered in the colon and rectum.

REFERENCES

1. Haves, Herbert T.: and Burr, Harry B.: Benign Lymphomas of the Rectum. Amer. J. Surg., **84**:545 (Nov.) 1952.
2. McCormick, Edward J.: Personal Communication.
3. Thiele, George H.: Leiomyoma of the Rectum. Tr. Amer. Proc. Soc., 610, 1946.
4. Neuman, Zvi.: Leiomyosarcoma of the Rectum Developing From Benign Leiomyoma. Ann. Surg., **135**:426 (Mar.) 1952.
5. LeFevre, Harry W., Jr.; and Jacques, Thomas F.: Multiple Polyposis in an Infant of Four Months. Amer. J. Surg., **81**:90 (Jan.) 1951.

6. DeMuth, Wm. E., Jr.; Cherney, Paul J.; and Fitts, Wm. T. Jr.: Adenomatous Polyps of the Colon and Rectum. Surg., Gynec. and Obst., 94:195 (Feb.) 1952.
7. Green, W. W.: Polyps of the Lower Sigmoid and Rectum. Ohio State Med. J., 37:38 (Jan.) 1941.
8. Green, W. W.: Evaluation of the Roentgenologic Diagnosis of Lesions of the Rectum and Sigmoid. Amer. J. Surg., 75:348 (Feb.) 1948.
9. Sunderland, Douglas A.; and Binkley, George E.: Papillary Adenomas of the Large Intestine. Cancer, 1:184 (July) 1948.

201 Professional Building

LATE TREATMENT OF SEVERE EXTENSIVE BURNS*

By T. G. Blocker, Jr., M.D.,
Clifford C. Snyder, M.D.
and
Stephen R. Lewis, M.D.
Galveston, Texas

Recent burn literature has stressed the early phases of therapy, both systemic and local, and glossed over the difficult aspects of the later stages in which there is an attempt first to restore the continuity of the skin, and finally to effect physical and economic rehabilitation. During the first week following trauma we are concerned chiefly with the shock-edema phenomena and with redistribution of fluids and electrolytes. At times it must appear that the measures employed for emergency therapy are part and parcel of an exercise in surgical physiology. Indeed, many patients are carried successfully through the first nine or 10 days who cannot possibly be saved, because of the depth and extent of their burns. In the second week, however, we are confronted with the complications of the patient *per se:* his age; his susceptibility to infection; his response to injury and pain on the basis of his endocrine, nervous, and intellectual makeup; previous liver or renal damage; cardiovascular status; possible addiction to drugs or alcohol; individual capacity for wound healing, and so on: all the factors which can never be managed on any precise formula basis.

Estimation of the depth of burns is often not possible until the tenth or twelfth day, when the healing of superficial lesions becomes evident. With exposure therapy the coagulum over areas of full-thickness skin loss is depressed and adherent to the underlying tissue, whereas over first and second degree burns it becomes raised and loose at the edges. Since spontaneous eschar separation does not occur except in the presence of healing or invasion by proteolytic organisms, necrotic tissue must be removed mechanically in preparation for grafting. Although a number of chemical debriding agents are being used for investigative purposes, none is yet available for routine use. Drugs which we have evaluated on our service have been ineffective, toxic, irritating, or too slow in their action to be practical.

If the dorsum of the hands is involved in deep burns, we believe that every attempt should be made to graft them early, by the eighth to twelfth day, if possible. Deep necrosis, joint involvement, and tendon fixation are prone to occur because there is little protective subcutaneous tissue. An attempt should be made to achieve maximum primary functional and cosmetic results by application of one-piece, split-thickness grafts to the back of the hands, extending to the mid-lateral line of the fingers and using adequate v's, darts, or small palmar flaps in the interdigital spaces to prevent dorsal webbing.

In general, debridement of burns may be carried out at about the end of the second week, followed by skin grafting as soon as possible. It is a great mistake to delay surgery longer than four to six days, as a rule, after debridement, hoping that granulations will improve in appearance. There is a turning point in burns of 35 to 40 per cent extent, or more, after which deep necrosis of the tissues will develop very rapidly; the patient's general course will take a downhill trend, and the opportunity for grafting will be lost. Recipient areas are prepared with wet dressings or macerating agents, such as furacin-impregnated or grease-gauze, applied under pressure dressings. If the culture has been positive for gram-negative organisms, particularly Proteus vulgaris or Pseudomonas aeruginosa, neomycin has the advantage of water solubility, low toxicity, and low percentage of contact type allergic sensitization. Since it is almost never used parenterally, local use carries very little danger and organisms usually do not become resistant to it for about 10 days. Concerning Staphylococcus aureus infection, those studied by Dukes[1] over a five-

*Read in Section on Surgery, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

year period (in part in our laboratory) have shown an increasing incidence of strains resistant to penicillin and a beginning resistance in 1953 to aureomycin, although it is still the best broad-spectrum antibiotic for general systemic use and has given excellent results on mixed infections of Staphylococcus and Pseudomonas when combined with topical use of polymixin B. Chloramphenicol and streptomycin are effective only in high concentrations in sensitivity tests, and erythromycin, at present, appears to predispose patients to extremely severe systemic, gram-negative, bacterial infections.

For chronic burns, in which both patient and wound require intensive care before surgery can be attempted, we have found the civilian defense burn dressing very useful, since it can be changed daily in a few minutes' time, without the pull from the conventional separate layers of gauze and bandage. We have used it (or home-made substitutes) also as a pad for the patient to lie on in circular burns of the trunk, when we wish to take advantage of exposure therapy on the chest and abdomen.

Chemotherapy in chronic infected burns should be prescribed on the basis of wound and blood cultures and on individual antibiotic sensitivity tests, both of which can be handled with a very simple bacteriology set-up. Cleanliness, that is, wet dressings or frequent change of dry ones, and such supportive measures as whole blood, high protein diet, and improvement of morale are important adjuncts to specific therapy.

Burn anemia is often masked in the early days after injury because of greater relative loss of plasma and a deceptively high hematocrit reading. Loss of red cells from destruction at the burn site and from increased fragility may, however, be as severe as from a major hemorrhage; and bleeding occurs each time adherent gauze is pulled away from the wound. Transfusions of whole blood should always be available at the time of surgery and should be given during the entire convalescent period if indicated. Hemoglobin protein has priority over plasma protein, and anemia must be corrected before the serum protein level can be restored to normal. In patients with burns of major extent, we begin forced feeding of protein concentrates at the end of the first week. In the milder cases, we use supplementary oral drinks of protenum,® provimalt,® or gevral,® with milk to provide about 135 grams of protein daily in addition to the house diet. In the more severe cases, patients are given forced feedings of whole protein mixtures by intragastric drip through polyethylene tubing, beginning with about two grams per kilo and working up to four or six grams per kilo, according to the individual level of tolerance. Fat content of the formula is supplied by ediol® or lipomul.® With such high protein intake, at times spectacular weight gain may occur even before the patient is completely skin grafted.

In addition to the high protein, high caloric diet, large amounts of supplementary vitamins are given, particularly those of the B complex, including B_{12} and ascorbic acid, up to 1,000 mg. per day. From past experience we have found it expedient to prescribe, also, at the end of the first week, a daily oral intake of approximately three to five grams of potassium chloride daily (adult dose), if renal function is satisfactory. Supplementary calcium is provided in the milk of the feeding formula, and a moderately high sodium intake by our local drinking water.

Improvement in patient morale should not be left to a chance word of encouragement, but should be planned as energetically as other phases of treatment. Assurance should be made, first of all, that the patient will be spared all unnecessary pain and that every major dressing will be carried out with the assistance of a skilled anesthetist to provide analgesia as required. Daily visits should be made by as many members of the staff as possible and extra nursing care should be provided. Early ambulation should be insisted upon in patients treated by the open-air technic, except when the lower extremities are involved. Relatives and friends can be urged to provide diversional therapy, and extra time should be spent acquainting them with progress in various stages and in telling them frankly what the ultimate prospects are likely to be, whether good or bad, so as to relieve them and the patient of the burden of uncertainty. There are no substitutes for an enthusiastic approach to the subject of burns, and abundant attention to the patient. Choice of local technic is of secondary importance.

The importance of early grafting in third degree burns is a subject which has been somewhat neglected in our medical school teaching, and one on which the general public is notoriously ill-informed. At the first grafting operation, every attempt should be made to obtain as much coverage of raw surface as possible. In the most extensive lesions, where donor skin is limited, it may be necessary to employ very thin, split-skin grafts, cut into strips and distributed over a wide surface, but the patient will be in better condition at this time than subsequently, since large, uncovered areas are open wounds through which plasma, blood, and electrolytes will be lost. If more than 50 per cent of the body surface is involved with full-thickness burns, homografts should be considered as a temporary, life-saving procedure, using fresh transplants from young adult donors, or cadaver or other refrigerated skin. We have employed lyophilized skin from the U. S. Naval Hospital at Bethesda in several patients, but this material is not as yet commercially available.

After grafting, dressings, either conventional or single-layer fine mesh gauze, are left in place for five days. Our practice is then to cover only the areas of granulation between grafts which are to be bridged over. As soon as the donor sites heal, in about 10 to 12 days, patients are ready for detergent baths in the Hubbard tank three times weekly, unless further grafting is required. About this time we often notice minute, localized points of infection, and the spread of new epithelium is slowed down considerably unless baths are available. Following removal of the patient from the tub, grafts are examined carefully, and any small pustules are opened with sterile instruments. Then patches of saline-moistened gauze are painstakingly re-applied to all raw granulating areas. If only one grafting procedure is necessary, patients are usually ready for discharge by the sixth or eighth week, unless some complication has arisen.

The latter half of the second week is a crucial time for patients with deep burns of 30 per cent or more. At this time deaths occur in the group expected to die from the time of admission. Other late deaths occur in relation to inadequate primary treatment, age and heart disease, drug addiction, and shock and dehydration following transportation to one hospital from another without suitable preparation or treatment en route. More than 70 per cent of the burn deaths on our service, however, are in patients with burns of 50 per cent or more.

The most disturbing complication which we see in patients with extensive burns, who appear to be doing well, is a sudden increase in morbidity with the loss of metabolic equilibrium and decreased resistance to infection. The various physiological phenomena of the shock syndrome recur, and at times there is severe gastrointestinal hemorrhage of the Curling's ulcer type. If a potent anti-stress agent were available it might be of value in alleviation of this burn decompensation state. At present, some patients die, in spite of intensive supportive treatment and heroic efforts at coverage with homotransplants or autografts during the crisis.

The decision to amputate one or both of the lower extremities, when they are involved in circular burns, is a difficult one to make; but, undoubtedly, this procedure is a life-saving measure when gangrene or other overwhelming local infection has occurred, when the patient is extremely toxic, or when the tendons of the foot and lower leg are destroyed.

Following primary coverage of burn surfaces patients are dismissed from the hospital, and usually at least six months' time is allowed to elapse before any definite reconstructive procedures are considered. During this period the lower extremities, if involved, are protected with elastic stockings and patients are cautioned against exposure to cold or trauma. In the more severe cases, gradual exercise is begun with the aid of a walker, and the legs are kept elevated when the patient is at rest until circulatory equilibrium is established. In some instances, it is necessary to use supportive bandages permanently and to advise sedentary occupations. Active exercise of the hands is encouraged and patients are instructed to use emollient creams and gloves during winter weather.

For minor reparative procedures we employ Z-plastic operations to relieve contracting bands and revise scars by single or multiple excision. For most satisfactory functional results in the popliteal, cubital, axillary and

chin regions, cicatricial contractures should be completely removed and the resultant defects covered with large one-piece thick-split grafts. Replacement procedures are used on the face, if necessary, using separate one-piece grafts for the entire forehead, nose, eyelid, or cheek, with employment of normal wrinkles to obscure suture lines. Where tendons have been destroyed in the hands, secondary arthrodesing and capsulectomy procedures are carried out in six to 12 months after injury, to allow for some subsidence of tissue reaction.

In conclusion, the early course of treatment of severe, acute, extensive burns has been fairly well standardized. Thereafter, therapy must be planned on an individual basis to prepare the patient and the wound for early skin-grafting and to remedy metabolic derangements initiated by thermal trauma. Ultimate rehabilitation requires time for re-establishment of functional equilibrium and may necessitate one or more secondary reconstructive operative procedures.

REFERENCES

1. Dukes, Charles D.: The Importance of Specific Antibiotic Therapy in Surgical Infections. Amer. Surg., **18:** 778-783 (Aug.) 1952.

DISCUSSION *(Abstract)*

Dr. Donald W. Smith, Miami, Fla.—The nutritional management of burned patients greatly influences the success of their late care. If the marked nitrogen loss seen in the severely burned patient throughout his illness is offset by an equal or greater nitrogen intake, severe deficits in body tissue protein will be prevented. These patients may lose 20 to 30 grams of nitrogen daily in their urine during the first week and as much as 18 or 20 grams each day for 4 to 6 weeks thereafter. The nitrogen loss by bleb fluids is less by the open air method of treatment but may be 5 to 7 or more grams per day soon after the burn, increasing with exudates of infection or with sloughs. Dr. Blocker and his co-workers have stressed the importance of feeding these patients in previous writings. They provide high calorie high protein feedings continuously 24 hours a day by use of an ingenious feeding pump which delivers feeding formulas at a constant rate.

Each gram of nitrogen, intake or output, corresponds to 6.25 grams protein. Thirty grams of nitrogen output therefore requires almost 200 grams of protein for nitrogen equilibrium. If much time is lost in instituting adequate protein feeding greater amounts will be needed to correct the deficit in body protein already in effect. When one considers the average daily protein requirement and the average daily intake in the healthy individual to be approximately 70 grams daily it is obvious that the sick, burned patient with anorexia will not consume an excess of 200 grams of protein daily. Marked weight loss, decreased resistance to infection, delayed healing and failure of skin grafts and reconstructive procedures are bound to result.

Excessively large individual protein feedings, even with adequate calories furnished by carbohydrates and fats, the body cannot synthesize into tissue proteins. Much nitrogen may therefore be lost in the urine just as is the case in protein overfeeding of a well nourished patient. This excess protein is simply used as energy or stored in the body, never as protein, but as body fat. Large amounts of protein may be fed and utilized for tissue fabrication, however, if they are fed continuously. We have repeatedly demonstrated this more efficient utilization by spreading the daily protein intake throughout the sleeping hours and around the clock.

We have routinely used continuous feeding in the severely burned by administration through a fine plastic nasogastric feeding tube. Patients have maintained their pre-burn weight or actually have gained weight during the several post-burn weeks. In such patients infections are rare and successful grafts are the rule. Convalescence is always shortened.

The solution which we use is a 6.5 per cent partial enzymatic hydrolysate of lactalbumen with 16 per cent sucrose, minerals and vitamins. The solution is sterile and resistant to bacterial contamination and growth throughout the period of continuous administration. It is crystal clear, thin and non-viscous, permitting gravity feeding through a well tolerated fine plastic feeding catheter. Starting with one liter daily the intake is increased approximately 500 cc. per day until 2½ or 3 liters daily are provided.

All phases of burn management are important. Shock, fluid and electrolyte shifts, malnutrition, cicatricial defects and contractures require expert management. In all of these and in minor burns, and in the management of disasters Dr. Blocker and his group have no peers.

Dr. Snyder (closing).—I do not think that it makes any difference how one administers a feeding, whether it is by pump, drip or other means as long as the patient receives enough nutriment to establish a nitrogen balance. There are times that this is difficult to accomplish. For example, if one encounters a youngster who has been accustomed to a diet of lollipops, pies, cakes and similar foods, who is then placed on a high protein high caloric diet, he will not tolerate the hospital menu. In our part of the country many of our patients are of Mexican parentage and most of their food is made up of hot dishes such as tortillas, enchilados, tamales and things like that. It is indeed a problem to substitute a hospital diet for these foodstuffs. In these cases, one may utilize tube feeding and also satisfy the patient with his familiar diet.

Though many advances have been made in the last decade, there is much room for improvement in the field of nutrition.

CLINICAL APPROACH TO THE WHOLE CHILD*

CASE REPORT

By C. CHRISTOPHER MORRIS II, M.D.
Galveston, Texas

In 1951 the Children's Hospital in Galveston admitted a 13-year-old boy, named George, whose complaints were of vague abdominal pains and generalized weakness. He turned out to be a great therapeutic and diagnostic problem, and ran a stormy course over a period of several months, before he was finally discharged. The hospital staff did not understand his illness, nor his unsatisfactory response to apparently adequate therapeutic management, during many weeks, until it was finally decided to consider his case from the viewpoint of the so-called whole child, after which some changes were made and he began to improve significantly.

The thesis of this paper is this: in order to understand this patient's condition and thus to bring it (and him) under therapeutic control, it was necessary to explore a causative chain of events extending back through a period of almost forty years. And an ancillary thesis is that similar explorations are necessary with almost every patient, if diagnostic understanding and therapeutic management are to be optimal.

George's father was born forty years earlier, the only son of Latin-extraction parents, in a large Texas city. The father grew up in a strict family, was made to mind his own father, toe the mark, go to mass regularly, learn his proper place as a second-class citizen in a community where lighter skins are dominant, and absorb the prevailing currents of feeling and opinion among Latin-Texan Americans. He went through the eighth grade without particular achievement, and got a job as an oil-field worker thereafter. He turned out to be a rather naive man with little education, hard-working, rough and ready, a moody, stormy individual, quick to anger, given to sullenness and violence, restless and relatively unsociable.

George's mother, Rita, was born 27 years earlier, also of Latin parents. She had a brother two years older and, as is true in many families, it was the boy in the family who was the favored one. Rita grew up in an extremely strict God-fearing family, and soon learned that it was her misfortune that she was a girl. Her brother was shown off and bragged about and thrown up to her as the model child; it was he who got the special treats, privileges and accolades, while she was treated as an unfortunate accident and not really worthy of serious consideration. Her father ran the family with an iron hand, and her only contacts with him were those in which he whipped her severely for practically any violation of the rules.

She remembers being a thin, scrawny, miserable little waif of a school girl, excessively shy, having no friends whatsoever, subject to constant criticism and punishment both at home and at school, feeling herself stupid, inferior and unwanted. Soon after her twelfth birthday puberty was reached and menstruation began. Completely unprepared, she was shocked and fearful. In confusion and embarrassment her mother tried to explain the facts of life, and succeeded in confirming Rita's belief that men are nasty, brutish and disgusting, but that women have to submit to them. And now that the periods had started, Rita's mother began to take her daughter out to the various social functions, always under strict chaperonage, as is usual in those circles. Included in these activities were trips to the town's skating rink.

One evening at the rink, George's father struck up a conversation with Rita's mother, got her permission to skate with Rita, and thus began his courtship. They skated several times, and although the man never called at Rita's house, and though they were not allowed to have a date alone, they began to exchange letters. After a few months, parental consent was given and the marriage was arranged.

In Texas, marriages of young teen-age girls are not uncommon. And it is probable that Rita's parents were happy to get rid of her. The marriage was a convenience to all concerned.

So we see George's father, then 27, marrying George's mother, then 13, he being more than twice her age. Lonely and shy, naive and ignorant, hardly even literate, in deathly fear of her father, desperately unhappy in her own home, longing for attention, and with severely neurotic confused ideas about sex, with anxiety, hostility and childish dependency all mixed up together deep inside her, it is easy to see why or how this girl in the sixth grade thought of her fiance as a means of escape from a desperately unhappy home situation. She was not thinking of him as a lover or partner; instead, her attitude was: "Here's a big, strong, grown-up man who can take care of me the way my own father ought to; living with him will be wonderful and will get me away from my own unhappy home."

So they were married and Rita started a new life. But her husband, our patient's father, had no intention of being a benevolent, fatherly, loving protector. Starting right out, he violated and continued to violate the most sacred and untouchable portions of her anatomy, and of her personality. In fear and

*Read in Section on Pediatrics, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

disgust, Rita submitted to his sexual attentions, and she also learned that except for that, he was completely disinterested in her; bored, inconsiderate, gloomy, punitive and rough, he demanded that she prepare his meals, do his laundry, keep the house, and so on, but otherwise leave him alone.

Rita became his slave. She also became openly hostile, resentful, antagonistic, sullen, bitter, and vengeful. Hate and hostility dominated much of her thoughts, coupled with increasing loneliness and desperation. She grew more obese, became slovenly and unkempt. Within two months she found that she was pregnant, and she immediately turned her hostility against the thing growing inside her. She thought of trying to abort it, but even the remembrance of that, when we met her 13 years later in Galveston, was enough to drive her Catholic conscience into even greater guilt.

The pregnancy was stormy. There were many episodes of bleeding, there was constant vomiting, and some anemia. Rita feared and hated the child inside her. She was afraid the pregnancy or the delivery would kill her, and she wished the fetus would itself die, either during the gestation, or at delivery, or soon thereafter. These secret wishes made her feel even more guilty and she tried to push them out of her mind and even deny that she had them, by becoming excessively protective of the infant.

Into this atmosphere our patient George was born and he was not a girl; he was male.

George's mother was a very immature, highly unstable, insecure, irresponsible, lonesome, unhappy 14-year-old girl. She hated her husband and father in particular, and all men in general. She could not hit back at the husband or father, and it was unavoidable that she should direct all of her hostility against the defenseless symbol of all her troubles, our patient, George.

In the light of the information offered here, gained from the mother directly, much of George's future course is predictable. He was a trial and a worry from birth. Breast-feeding was unsuccessful, and the mother had to turn to the irksome chore of preparing formula. George did not eat well, vomited persistently, gained very poorly, cried all the time, developed no regular sleep habits, and had frequent colds. When the father returned home from work he took off his shoes, ate supper, drank beer, read the paper, and ignored his wife and child. His sexual attentions to his wife were nightly, and he slept right through George's crying. In fourteen years of marriage the parents produced nine children, and Rita had several miscarriages.

George's motor development proceeded at normal rates, and he was walking at 16 months. By that time he was a squalling, dirty-nosed, demanding, unsightly brat, following his mother everywhere around the house, pulling at her dress and demanding her attention, getting maliciously into all the household possessions, and often having severe yelling, kicking temper tantrums. It was not possible to ignore him, but threats, scoldings, cajolery, bribery, severe spankings, and phenobarbital, all failed to improve him.

When he was two years old his sister was born, and George suddenly became far more unmanageable. He pinched, scratched and bit the baby, kicked and fought his mother, but had learned from sad experience to steer clear of his father. The family situation deteriorated bit by bit, as the mother knew how to do only what she had been taught in her childhood, which was to become ever more severe, restrictive and punitive with the little monster in her house.

To his mother, George seemed to become more and more adept at spiting her in ways she could not combat, such as scowling, crying and having repeated bowel movements. She often took him out of the house and down the street to an outsider who seemed to be in cahoots with her. This stranger poked and prodded, and stuck things into George's ear, and into his mouth so that he gagged and bit; this stranger also stuck needles into his rear. George learned to resent and fear the punishment he would get from this stranger who wore the white coat.

One day when George was three his mother took him to this bogey-man's office, and seemed to be more complaining than usual; mother and physician looked grimmer than ever and there were several visits in a row. George may have figured that a terrible punishment was being prepared, and he was right. Extreme anger and anxiety are well known to have marked physiological effects, inducing great changes in the autonomic and endocrine functioning of the body, and if an individual suffers anger and anxiety over a long period of time the neuro-endocrine tissues may undergo permanent pathological changes.

George did not know that, and he interpreted the various laboratory procedures as new evidence that the physician and his mother were ganging up on him again, which they were. The doctor showed mother how to stick George with a needle, and the mother then herself adopted this refined method of torture. For, beginning when George was three, she continued to stick him throughout his life, and not just occasionally, but regularly, every day. In George's eyes, she repeatedly lied to him, telling him the injections were for his own good; but George had learned that his mother did not like him, and he could not believe her. She also had the effrontery to try to make him stick himself, but cooperating with his hated mother was just about the last thing George had in mind, especially when that involved sticking needles into himself.

When the daily needle sticking began at age 3, George's mother also devised another even crueler means of punishment. He had always loved desserts, cookies and candy, but now she flatly refused to

allow him to have any more; and if he ever stole any she became tearful and belligerent and whipped him again.

As he grew older George was not allowed to play rough and tumble, climb trees, run and wrestle with other children. His brothers and sisters were, but George's play was heavily restricted. Even the teachers at school were in a conspiracy against him. The other children nicknamed him "Sweet Pea," jeered at him and excluded him from their activities.

George became resentful against everyone, and rebellious against everything. He did not know why everybody seemed against him, and felt guilty about it, and wanted to be punished for it. He figured that his illness was itself a punishment because he was "bad," and he kept doing things that invited punishment by others. At 13, comparable to a 9-year-old in height and weight, his small stature was another symbol of punishment for his "badness."

This was the child admitted to our hospital in 1951. Born into an atmosphere of lovelessness and hate, George reacted in kind, with rage and violence. The severe storms of anger and anxiety raised their concomitant physiological disturbances involving the entire neuro-endocrine apparatus. Why his pancreas became the specific organic victim, instead of some other tissue, we do not know. But we are convinced that George's physiological status and his vicious outlook on life are both the outgrowth of this chain of events extending back through many, many years.

With this backdrop in mind it is easy to predict George's hospital course. He resented hospitalization, as he resented everything. He was obstructive and aggressive with the nursing staff, hostile and mean with the other children, noisy, uncooperative and hard to handle. Little incidents on the ward upset him disproportionately, and thus his blood sugars were subject to very wide and only difficultly controllable swings. On one occasion, when a high sugar level was found, George was accused by a frustrated member of the staff of having stolen sugar. The charge was unfounded, but George reacted in the expected manner. The ups and downs of hospital life created mood swings of intense degree, and the wide variations in blood glucose could not be controlled by any manipulation of diet or insulin dosage.

George's physiology was dealt with according to the best precepts, but George's personality was not. Almost every member of the staff was irritated and nettled by George's "non-cooperation" and he met with very unsympathetic handling from all concerned.

Eventually, George came to be studied from the orientation of the "whole child." The hospital personnel saw him in a different frame of reference. Attention began to be paid to his emotional status, after which his behavior began to improve and his physiological status became much more easily regulated and controlled. He was discharged improved, after and because some of his anxiety was relieved.

This case is perhaps an exceptional one in its severity, but in other ways it is far from exceptional, and in fact is very representative of our experience with large numbers of sick children. It is presented here to illustrate the advancement in pediatric horizons, which has been termed "The Whole Child." George has implications for every child, everywhere, no matter what any particular child may demonstrate in the form of organ pathology. The modern concept in pediatrics is this: that illness of any kind is not adequately understood and not adequately managed, unless it is considered as an incidental occurrence in and an outgrowth of the patient's entire life history, including how he feels about himself and his status in his family.

It is our conviction that many chronic conditions among children are the result of, among other factors, a seriously disadvantageous parent-child relationship, with the appearance in the child of severe and long-lasting anxiety. Examples may be drawn from any case of eczema, rheumatic fever, convulsive disorder, adrenal disease, severe poliomyelitis and so on. The more we study the background of a child with chronic disease, the more we realize that his tissue pathology is only one of many difficulties with which he has to cope, and the more we also realize that prior to the tissue disease, he had severe personality difficulties, which had their own roots in parental problems of many years duration.

From all this emerges the supremely important suggestion that these conditions are preventable: by identifying and handling disturbed parent-child relationships in their early stages before irreversible tissue changes occur, as can be done in marriage clinics, prenatal clinics, postnatal follow-ups, well-baby conferences, or in visits to the physician's office for other matters such as feeding disturbances, immunizations, common respiratory tract infections and the like.

It is not being proposed that anxiety is the only factor at work in the causation of disease

and maladjustment, nor is it proposed that clinching and incontrovertible evidence has yet been assembled, that would convince all skeptics. But it is proposed that long-lasting anxiety is a necessary factor in the causation of these chronic conditions. Evidence from many different sources has already been accumulated which gives this view almost overwhelming support.

This concept of illness is often caustically or patronizingly rejected out of hand, perhaps because it reminds us in some way of our own limitations and inadequacies. It is also true that the presence of anxiety in a child is frequently masked and therefore difficult for many physicians to detect, especially when they are not in the habit of thinking of it, or when they consciously or unconsciously reject the whole idea anyway. And the same comment can be made about the detection of unfavorable parent-child relationships. This is why pediatric centers are now coming more and more to incorporate this sort of approach into their teaching, service and research programs.

This whole child concept serves as a fresh avenue of approach to many difficult problems, and opens up endless new horizons and possibilities to the practicing physician and other health workers in all matters pertaining to human discomfort and disease. It is being given serious consideration by many physicians who deal with children.

DISCUSSION *(Abstract)*

Dr. William G. Crook, Jackson, Tenn.—Often we are too concerned with the tonsils, the eosinophil count, the heart murmur, and the electrocardiogram of the child. We are not treating laboratory tests, we are not treating murmurs, we are not treating growth charts, but individuals.

In adult medicine, this has been much better recognized than in the field of pediatrics. It has been only recently that the idea is being crystallized more and more in pediatrics.

I should like to point out briefly on the blackboard what I see as a practicing pediatrician. In five years of practice, I have seen only one case of leukemia, six cases of rheumatic fever, fifteen cases of nephritis, one case of Hand-Schuller-Christian syndrome and one case of endocardial fibrosis.

How many behavior problems have I seen? Well, I would say at least 500. How many anxious parents have I seen? How many patients have I had? That will answer the preceding question. How many thumbsuckers? How many feeding problems? These are what we see every day in practice yet think how little emphasis has been placed on this phase of pediatrics in the past.

One way of helping in this problem is by talking to the parents when the baby is born. Of course we have to get the cooperation of the obstetrician for that. It does not mean running into the mother's room for two minutes and handing her a printed slip. It means sitting down and interpreting the baby to the mother and father: what they should expect of him, his needs, his peculiarities, his handicaps, relieving their anxieties and giving them confidence.

In the case of a child a year old, tell the parents the appetite is going to drop off. In the case of the child two years old, tell the parents that the child is naturally a little hellion, saying no to everything. At two and a half, he cannot make up his mind and so on. The important concept is to treat the whole child.

The child doctor is in a uniquely strategic position. He is like the man that is raising flowers who can do more to insure their optimum growth and development than the man who comes along when the plant is full grown and perhaps withered and warped. Preventive or constructive pediatrics deserves a far greater share of our interest and efforts.

In brief, if we can somehow relieve the uncertainty of the modern parent, and they have a tremendous amount of it, we shall relieve their tension and anxiety. If they have more confidence, they can do a better job.

Dr. Carroll M. Pounders, Oklahoma City, Okla.—I should like to ask whether, if George had had a normal background, the right kind of parents, the right kind of environment his islands of Langerhans might have functioned in a normal way and he might have avoided having diabetes mellitus?

Dr. Margaret Mary Nicholson, Washington, D. C.—In Washington in 1928 we opened a place out in the country. The first employee put in was a person whom they called a grandmother. She had no degree in child psychiatry or psychology, but the children were allowed to go and talk to her. Here, they have had only one case of asthma or eczema which was not cured. It was not through medical attention it was through this elderly woman who had had a great deal of experience in taking care of children, someone to whom they talked, and she passed on what she learned to the doctors. We, the doctors, deserve no credit for it. If you come to Washington, we should like to have you go there. It is called the Christ Child Convalescent Farm.

Dr. W. C. Verdery, Fayetteville, N. C.—I should like to ask how early in infancy Dr. Morris spots this anxiety and insecurity?

Dr. Morris (closing).—We should like to follow 1,000 or 10,000 or 100,000 children in whom there was a small degree of anxiety, what you might call the normal amount, instead of an excessive amount, for 90 years, along with a controlled group of another 1,000 or 50,000 in whom we knew there was a rather large degree of anxiety existent, also to be followed for 90 years. At the end of that period of time the incidence of various chronic illnesses in the two groups might profitably be compared. It may be that several decades or several centuries from now some billionaire, possibly a Texan, will get around to conducting an experiment of this sort.

The parent who is going to have an anxious child is herself an anxious parent. The physiological effects of anxiety are present in her during her pregnancy, in hormones or other chemicals that move into and out of the blood stream and cross the placental barrier. We have discovered that some children from the day of birth exhibit tissue changes that probably are the result of severe anxiety storms in the mother. Consequently you might say that from the clinical point of view their psychosomatic neuroses began before they were born.

Most often, of course, we are not able clinically to identify these conditions until the child is a week, two weeks, or three weeks old. Those of you who have seen crying babies who do not do well, I am sure have noticed that the parents themselves are not doing well. They are upset, worried, preoccupied with problems of their own, and those of us who have had a chance to explore the parental backgrounds discover that they have had problems of their own which went back many years into their own childhood.

A SUGGESTED PLAN FOR UNDERGRADUATE DERMATOLOGICAL TEACHING*

By THOMAS W. MURRELL, M.D.
Richmond, Virginia

The limits of medical education today are the limits of human physiology and the question has narrowed down to just how much of a beating a man can take: the man in question being he whom we call the student.

A hundred years ago the time of the medical course for the degree of M.D. was one year. Fifty years ago it had become four years. Considering that which has been added to the curriculum in the last fifty years as compared to the first fifty, by any rule of proportions, the course today should be eight years instead of four. What will it be fifty years from now with all the sciences contributing to the problem of medical care? The student, physiologically, has been the same for 50,000 years and is a fixed quantity. Something has got to give, and that something is the curriculum as concerns the undergraduate.

Premedical education is partially under the control of the faculties of medicine and possibly some of the basic sciences now taught in the medical school can be shoved forward in the area of the premedical. Postgraduate education is an elective decision on the part of the graduate and no compulsion can be exercised by the colleges to demand postgraduate studying. This puts the full pressure on the undergraduate and he is restless and is rebelling in his own way.

After all, the practice of medicine is only a way of life, and in any way of life the baby crop is still the essential crop. No matter how idealistically intellectual you become, when you start to arguing with God you always lose. There is a proper time for mating and a proper time for babies, and it happens to be the time of most of the beauty and poetry of human existence. If any faculty thinks it can rob youth so as to prepare men to serve humanity in medicine it deserves to be answered by the commander of Bastiogne.

Fifty years ago a married man in the medical school was an exception. In September 1952, at the Medical College of Virginia (my own school) there was a medical school of 366. In the freshman class, there were 20 married, 19 of the sophomores, 36 of the juniors and 39 of the seniors. Almost exactly one-third of the school was married and many had more than one child. Actually, the situation is more acute than these figures (which were gotten from a questionnaire) show. The dean, when having interviews for interneships, found that 49 of the seniors were married and 10 more intended to marry before graduation. In the

*Read in Section on Dermatology and Syphilology, Southern Medical Association, Forty-Seventh Annual Meeting, Atlanta, Georgia, October 26-29, 1953.

fourth year family there were 48 children, one student with four, and four with three apiece. Q. E. D.

The school, by grants and loans, is attempting in many cases to meet the economic stress this inevitably produces, but (maybe because of my victorianism) I cannot believe this to be the logical answer to the problem, for loans and grants have more than a slight taint of the economics of the past era, which seem to me to be unsound. Since time is the crux of the problem, it is bound to mean that all departments must be severely cut in allotted time. If we who are interested in dermatology do not do the cutting, then it will be done for us by those with no specific knowledge of our problems.

The following is a suggested plan. There are three kinds of dermatology:

(1) General practice dermatology
(2) Consultant dermatology
(3) Postgraduate dermatology

DEFINITIONS

(1) General practice dermatology consists of those conditions a practitioner should be able to diagnose and treat to an average successful result. Examples are scabies, impetigo and rhus dermatitis.

(2) Consultant dermatology consists of conditions which the practitioner should recognize and partially treat, but in which he will need dermatologic help. These are the cases in which x-ray, radium, ultraviolet and electrodesiccation are recognized valuable help. It also includes diseases in which error can lead to disaster, such as acne, tinea capitis and lupus erythematosus.

(3) Postgraduate dermatology will include the rest of the subject, but particularly all lesions which require a biopsy to verify a clinical opinion. Dermatologic teaching usually consists of didactic lectures and assignment to the clinic. The first can be absolutely controlled, but the clinic becomes more fluid. In the clinic, if a student is assigned to a case of infantile eczema, he should be held accountable for that which he learns. He should be shown the rarities such an xeroderma pigmentosum, the lymphoblastomas, tuberculosis verrucosa cutis, but in no way held responsible to remember these.

Among the indices in modern texts of dermatology, one of the best is that of Ormsby and Montgomery. This index was gone through marking the entities as 1, 2 and 3. From this, two lists are compiled to constitute that which should be taught.

GENERAL PRACTICE DERMATOLOGY

Dermatitis medicamentosa (limited)
Dermatitis venenata
Occupational (limited)
Cosmetic
Bath
Heat Rash
Eczema (hands
(infantile
Tinea (feet
(groin
Parasitic infections (common)
Pyogenic infections
Impetigo
Furuncles
Carbuncles
Erysipelas
Urticaria
Verruca vulgaris
Herpes simplex
Herpes zoster
Seborrheic dermatitis
Sebaceous cysts

CONSULTANT DERMATOLOGY

Acne
Coccogenic sycosis
Hyperidrosis
Lichen planus
Lupus erythematosus
Neurodermatitis
Pruritus vulvae et ani
Tinea capitis
Hemangioma
Epithelioma
Keloid
Acne rosacea
Melanotic moles
Pityriasis rosea
Plantar warts
Alopecia areata
Psoriasis

The selection of the entities is not so simple as it seems, largely because of the psychosomatic angle which is much a part the art of medicine. This is my reason for including alopecia areata and psoriasis in the consultant group. What to do is obviously a more easy decision in the known than the unknown.

The lists are much more likely to be too long than too short and, of course, are swayed by personal experience. The man from Florida would say "You have left out larva migrans," and the man from North Dakota, "You have left out frostbite." Being from Virginia, I should. At best it is but a compromise and the two groups can be switched at will. It all depends on the acceptance of the three-group idea.

There is a Georgia story of two negro women, discussing the condition of another woman who had lately been subject to a massive surgical cleaning of her abdomen and pelvis: "What did he take outer her?" asked one. "I don't know," was the reply, "He jest opened her up and help hisself." I do not think there is a dean of medicine who will not agree to the necessity of an operation. The above is only a suggested plan, which, of course, will not be the final plan. For the present we shall have to open her up and help ourselves.

DISCUSSION *(Abstract)*

Dr. Herbert S. Alden, Atlanta, Ga.—The difficulties of modern medical education seem to be general throughout the United States. There is a growing dissatisfaction not only with the existing methods of instruction but with the quantity of scientific information which must be delivered to and sometimes poked down the mental gullet of medical students. We must implant less and less of more and more expanding medical knowledge within the same space and time which was allotted to us a quarter of a century ago.

We can, of course, do very little about the human physiology of the medical student or about his desires for marriage and a family, (and, after all, this is not our job), but it does seem obvious that we must meet, head on, the time and space limitations which are present in the vastly enlarged medical curriculum of the present day. I should like to commend Dr. Murrell for his simplified outline of the teaching of dermatology, but I should like to add that it is the mind of the student and his ability to think logically that we must concentrate upon in our instruction.

And so, in our teaching, we must be quick to catch the moment when the spark of our instruction will ignite in him the desire to investigate further those things in dermatology which will be useful and necessary for him to serve the patient better; those things which make him less of a pseudo-dermatologist, and those things which will give him a general knowledge of dermatology and allow him some competence in the care of simple skin eruptions.

In essence, let us strive to teach a deeper knowledge of fewer skin diseases, rather than a wide knowledge of many, so that the resulting physician will not be like the well-known piney woods swamp: all over creation, and only knee-deep anywhere.

Dr. Paul G. Reque, Birmingham, Ala.—When I was a medical student our dermatological teaching was very little indeed, and as I came to help in the teaching of dermatology I thought we needed more and more training for undergraduates and less and less for the graduate inasmuch as he was going to take that up for himself.

The simplification of the curriculum or teaching of dermatology, is being done for us by evolution in a way. Recently it was suggested that the number of hours we have devoted to the teaching of syphilology be reduced. Our usual course was about eleven one-hour lectures, and the tendency today is to drop that down to four. Syphilis is not the important subject it was twenty years ago, and I think more and more of other diseases will probably go that way some day. Some of the information we have will be discarded, new information will be added to simplify the entire problem.

Simplification has to come and possibly only by evolution can we arrive at a satisfactory solution. I am one who still thinks that we teach less than we should rather than too much, and I think, in analyzing the situation, some years ago we found that only 25 per cent of the medical schools were giving as much time as we were to dermatology. In the two institutions in which I am particularly interested, we were not giving any more than we really needed.

I am sure we want to attract more men into dermatology, to increase our number and the respect for our specialty.

Dr. H. M. Robinson, Sr., Baltimore, Md.—I am more or less in Dr. Murrell's class, having been teaching constantly for forty-four years. I have been very much interested in my subject, and have been able to transfer this interest to my students. The school has, however, reduced me from an original 54 hours a year to 20 hours, and this year an attempt has been made to cut us down to eight hours. I do not see how one can teach dermatology in eight hours a year; at least not so that students would understand it. We have made a list of the commoner skin diseases and attempt by reading assignments and demonstrations of actual patients to teach the branch. That has been our practice for thirty years.

As I near the end of my tenure I can only hope the younger men will not permit dermatology to be relegated to a minor position.

Dr. J. Fred Mullins, Galveston, Tex.—At the University of Texas Medical Branch we have not such a pessimistic outlook as has been presented here. The sophomores are given eight hours of didactic material, and the juniors have forty hours presented in the same manner. The seniors are on our service for a period of three weeks for a full eight-hour day of instruction. Also the seniors are given two hours per week of didactic material in conjunction with clinical cases, and this extends over a three-month period.

Southern Medical Journal

JOURNAL OF THE
SOUTHERN MEDICAL ASSOCIATION

Copyright, Southern Medical Association, 1954. Material in the Southern Medical Journal, being covered by copyright, may not be reproduced in whole or in part or abstracted without permission from the publisher and then only if due credit is given.

Published monthly by the Southern Medical Association, Empire Building, Birmingham 3, Alabama. Annual subscription, $10.00. Single copies 85c each.

Entered as second-class matter at the Post Office at Birmingham, Alabama, under Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized December 20, 1921.

Volume 47 April 1954 Number 4

EDITORIAL DEPARTMENT

Editor

M. Y. Dabney, M.D., Birmingham, Alabama

Associate Editors

Howard L. Holley, M.D., Birmingham, Alabama

Curtice Rosser, M.D., Dallas, Texas

Tinsley R. Harrison, M.D., Birmingham, Alabama

SOUTHERN MEDICAL ASSOCIATION
Forty-Eighth Annual Meeting
St. Louis, Missouri, November 8-11, 1954

TOXICITY OF THE NEWER ANTI-HYPERTENSIVE DRUGS

The management of patients with hypertension continues to be a subject of much controversy. A variety of new drugs are now being used with varied reported success in this disease state. Side effects of such therapy, some of which are of alarming nature, are now being recognized with increasing frequency. In general, the severity of these reactions is in proportion to the potency of the hypotensive activity, that is, the more powerful the drug as an active blood pressure lowering agent, the more likely it is to cause trouble. Also, the hypotensive action, as well as the undesirable side effects of any drug in any given patient, are quite unpredictable.

Most of these drugs produce well known mild side reactions, easily recognizable, and of reversible nature. The Rauvolfia (ophioxylin) drugs have a basic sedative action, together with a mild hypotensive action. This drug frequently produces nasal stuffiness, excessive drowsiness and occasionally uncontrollable nightmares. The Veratrum preparations, unfortunately, have a narrow therapeutically effective dosage range, limited by the appearance of nausea and vomiting. Hydralazine may produce intractable headache and excessive palpitation. Hexamethonium may cause constipation and excessive postural hypotension.

It is not generally realized, however, that there may occur side effects of more serious nature associated with this therapy.[1] Worthy of mention are the signs and symptoms of myocardial ischemia, particularly seen with administration of hydralazine and hexamethonium. Hydralazine appears to produce the myocardial anoxia only in those patients who have previous coronary artery disease. It is of interest that the production of evidences of myocardial ischemia during therapy with this drug does not necessarily require a hypotensive episode. Neither are the symptoms of angina during hydralazine therapy related to effort. The myocardial ischemia can be substantiated by the appearance of electrocardiographic evidence of myocardial anoxia.

Angina following hexamethonium therapy, on the other hand, appears to be definitely related to the hypotensive episodes frequently associated with treatment with this drug. The possibility of cerebral thrombosis during a severe hypotensive episode has been recognized by several investigators. It also seems not unlikely that renal shutdown which may follow the use of excessive doses of hexamethonium is due to a sudden and precipitous fall of the blood pressure. Other vascular accidents may occur, for example, in the extremities, eye, or intestinal tract.

These dangers emphasize the wisdom of instituting hypotensive therapy, first, with the milder agents, proceeding very cautiously with the aim of lowering the blood pressure smoothly and slowly, rather than suddenly and dramatically. It is only in an occasional case that dramatic hypotensive action is indicated. Hydralazine therapy appears to be contraindicated in patients with evidence of coronary artery disease.

Hydralazine, from its structural formula, might be expected to depress the bone mar-

1. Wilkins, R. W.: Current Drug Treatment of Hypertension. Modern Concepts of Cardiovascular Disease, **22**:198-201 (Nov.) 1953.

row; however, there has been only one reported case of pancytopenia following the use of this drug. Symptoms of acute arthritis and lupus-like syndrome have also been noted after prolonged administration of large doses of this drug.[1]

It should be mentioned, however, that there have been several case reports of massive gastrointestinal hemorrhages occurring in patients who are under hydralazine therapy. It is interesting to speculate that the autonomic blockage of adrenergic impulses induced by hydralazine might allow unopposed cholinergic hyperacidity and precipitate a hemorrhage from peptic ulcer. In view of this it is now recommended that antacids be administered in patients who are being maintained on high doses of hydralazine.

Certainly these hypotensive drugs are not without danger and the increasing number of reports of serious toxic and side effects emphasize the fact that they must not be used indiscriminately but only when definitely indicated.

MALE HORMONE THERAPY AND TUMORS OF THE PROSTATE

Several theories have been advanced in recent years relating the development of benign prostatic hypertrophy to an endocrine imbalance. It is now believed that there are two testicular hormones, androtin, which is produced by the cells of Leydig, and inhibin, that is derived from the tubular germinal epithelium. There is evidence that inhibin controls the production of gonadotropins in the hypophysis. The absence of this mediating hormone results in overproduction of the Leydig cell stimulating hormone. This loss of normal hormonal balance results from progressive atrophy and disappearance of the germinal epithelium of the testes. Under the influence of the gonadotropins the persistent cells of the testes, that is, the interstitial cells of Leydig, continue to produce hormone. This hormone, androtin, results in the development of prostatic tissue hyperplasia.[2,3]

Other workers believe that there are two distinctly different gonadotropic hormones produced by the pituitary.[4] One of these hormones may control the development of testicular germinal epithelium, that is, spermatogenesis, while the other controls the cells of Leydig, and therefore indirectly, the prostate and the accessory sex glands. It is possible that each may exert a mediating effect on the production of the other hormone. As aging progresses the hormone affecting spermatogenesis is reduced and may disappear. This may allow the remaining hormone to be produced uninhibited. This persistent stimulation results in prostatic epithelial hyperplasia.

Certainly the importance of the endocrine influences in cancer of the prostate has been emphasized and translated into clinical significance by the demonstration that the disease can be controlled to a considerable extent by castration and administration of estrogens.

It can readily be seen that with the existing evidence of the importance of endocrine control in the development of prostatic tumors, the therapeutic use of even small doses of androgens in men over 50 years of age is a questionable practice.[5] The normal endocrine balance is a very delicate one. This therapy might stimulate prostatic epithelium to overgrowth with the possibility of activating quiescent malignant foci.

CIGARETTE SMOKING AND CANCER OF THE LUNGS

There is accumulating evidence of the existence of a definite relationship between cigarette smoking and cancer of the lung. Statistics from large series of smokers and non-smokers appear quite convincing that there exists such an etiological linkage. Clinical data reveal that non-smokers rarely have lung cancer, whereas the risk increases directly with the amount of tobacco smoked.[6] Until recently there had been no experimental evidence that would substantiate these claims.

A report suggesting experimental confirmation of such an etiological linkage has now

1. Perry, H. M., Jr.; and Schroeder, H. A.: Syndrome Simulating Collagen Disease Caused by Hydralazine (Apresoline). J.A.M.A., **154**:670-673 (Feb. 20) 1954.

2. McCullagh, D. R.: Dual Endocrine Activity of the Testes. Science, **76**:19-20 (July 1) 1932.

3. McCullagh, D. R.; and Walch, E. L.: Experimental Hypertrophy and Atrophy of the Prostate Gland. Endocrinology, **19**:466-470 (July-Aug.) 1935.

4. MacCallum, W. G.: Pathological Physiology of the Prostate. Physiol. Rev., **17**:73-91 (Jan.) 1937.

5. Baker, R.: Studies on Cancer Prevention in Urology: 1. Prostate. Ann. Surg., **137**:29-35 (Jan.) 1953.

6. Doll, R.: Mortality from Lung Cancer Among Non-smokers. Brit. J. Cancer, **7**:303-312 (Sept.) 1953.

been published.[1] In this study a significant number of mouse skin cancers were produced by local application of condensed tobacco tar. In attempting to analyze this work critically it might be countered that it does not necessarily apply to man, in that there is no evidence that mouse skin reacts like human bronchial epithelium. Such an assertion, however, would appear untenable inasmuch as it has been repeatedly demonstrated (using coal tar and petrolatum products) that there exists a close association between epidermoid carcinogenesis in mice and men.[2]

Certainly smoking is not the only etiological factor, but it would appear that it is one of the important ones. Hereditary factors or individual predisposition have undoubted influence on the development of this disease.

Although resolution of this problem must await accumulation of more data, it would appear that patients with known hereditary tendency to lung cancer should refrain from smoking. It should be pointed out that excessive smoking in other individuals may predispose to the development of carcinoma of the lung.

TWENTY-FIVE YEARS AGO

From Journals of 1929

Milk Injections for Pelvic Inflammatory Disease.[3]—Watkins reports four cases of pelvic infection, three being gonorrheal, in which the injection of fat free cow's milk into the gluteal region proved effective. He says that the pain and tenderness are more quickly relieved, and the disease disappears more rapidly under this form of treatment. . . . Patients who of necessity have to undergo operative treatment seem to be better surgical risks after they have had milk injections.

Motion Pictures and Psychic Disorders.[4]—Dr. Edgard Leroy . . . cites a number of cases in which children have shown signs of morbid fear, nightmare, grave modifications of character, and even perverse tendencies, the onset of which could be traced to the presentation of a film depicting some crime. . . . these effects would not have been produced if the subjects had not been predisposed. . . . But such predisposed children are very numerous among the working population, partly owing to the fact that congenital syphilis is not uncommon. The motion picture has become the "school of delinquency."

In Belgium, children under 16 are not permitted to attend public motion-picture houses. . . . Dr. Leroy thinks that the problem deserves the attention of the health section of the League of Nations.

Promotion of Increase of Population.[5]—The council of ministers (Italian) at the request of the premier, recently approved certain measures calculated to promote the growth of the population. . . . married men with children will be given preference in competitive examinations for public office. . . . This principle will . . . be recognized in the awarding of contracts . . . as well as in the allocation of dwellings. . . . Employers of labor are . . . compelled to hold open positions for women who drop out for two months on account of pregnancy and the puerperium . . . for child birth . . . the mother will be entitled to unemployment aid.

1. Wynder, E. L.; Graham, E. A.; and Cronninger, A.: Experimental Production of Carcinoma with Cigarette Tar. Cancer Res., **13**:855-864 (Dec.) 1953.

2. Editorial: Tobacco and Carcinoma of the Lung. New Eng. J. Med., **250**:125 (Jan. 21) 1954.

3. Watkins, R. E.: Milk Injections in Treatment of Pelvic Inflammatory Disease. Northwest Medicine, **28**:70, 1929. Abst. J.A.M.A., **92**:1388, 1929.

4. Paris Letter. J.A.M.A., **92**:1463, 1929.

5. Italian Letter. J.A.M.A., **92**:1463, 1929.

Book Reviews

Modern Concepts in Medicine. By Julius Jensen, Ph.D. (In Medicine) University of Minnesota, M.R.C.S. (England), L.R.C.P. (London), St. Louis. 636 pages with illustrations. St. Louis: The C. V. Mosby Company, 1953. Price $11.50.

This extraordinary book has been written "to facilitate the understanding of internal medicine" by surveying medical diseases in the light of recent scientific discoveries and certain philosophic principles. The human body is viewed as being concerned with the maintenance of adaptive processes under the influence of changes or stressors. Failure of these adaptive processes constitutes disease, the latter being considered as disturbance of function rather than traditional disease entities. A large number of disorders are then discussed, either as derangements of the processes of adaptation themselves, or of the organ systems carrying out these processes, or as derangements of the endocrine, enzymatic, and nervous systems which are said to control and regulate the adaptive processes. Clinical descriptions of these diseases are given from the point of view of functional disturbance. In a fascinating chapter, the author shows how Western man became subject to new physical and psychic stresses in the course of his development. The book is "primarily intended to stimulate thought."

Manic-Depressive Disease. Clinical and Psychiatric Significance. By John D. Campbell, M.D., Chief Psychiatrist, Peachtree Sanitarium, Atlanta; Captain, MC, U.S.N.R. 403 pages. Philadelphia: J. B. Lippincott Company, 1953. Price $6.75.

The material in this volume is based upon observations made on 522 manic-depressive patients during a

period of four to five years. The book encompasses all forms of manic-depressive disease, ranging from mild personality disturbances to severe psychosis. Initially, the characteristics of the cycloid, pre-psychotic patient are clearly described. A symptomatic triad of emotional, mental, and autonomic manifestations is then outlined as a pathognomonic sign of manic-depressive illness. A study of a series of children with manic-depressive manifestations and outright psychotic episodes, is one of the most arresting features of the book. Social implications of this disease (marital problems, drug addiction, criminal behavior, and so on) and the danger of suicide are analyzed in subsequent chapters. Finally, there is a discussion of differential diagnosis and treatment of the disease. The author points out the importance of differentiating it, as an independent entity, from both psychoneurosis and organic illness and lists significant, positive diagnostic criteria for the recognition of mild manic-depressive psychoses.

He is much less convincing in his efforts to prove that in manic-depressive disease, there is an endogenous disturbance in central autonomic functions, and that some ill-defined hypothalamic disturbance causes the disease. The frequency of autonomic symptoms is adduced as proof; but surely these are not specific for the disorder and may only be part of the total reaction of the organism. The significance of the book does not lie in this tenuous hypothesis but rather in its descriptive sections which will increase the diagnostic capabilities of any reader.

A Source-Book of Medical Terms. Text by Edmund C. Jaeger, D.Sc., Formerly Head, Department of Zoology, Riverside College, Riverside, California. Foreword by Irvine H. Page, M.D., Director, Research Division, Cleveland Clinic Foundation, Cleveland, Ohio. 145 pages with illustrations by Lloyd Mason Smith and the author. Springfield, Illinois: Charles C. Thomas, Publisher. Published simultaneously in England and Canada, 1953. Price $5.50.

The purpose of this source book is to list alphabetically the word elements, combining forms, prefixes and suffixes making up the medical vocabulary. The literal meaning, derivation, history, and spelling of these elements used in constructing medical terms are given in each instance. All entries are supplemented by examples showing their use in the composition of scientific terms. Facts of unusual interest have been set in boxes, and small drawings illustrate the etymology of selected words. In an introductory section, it is explained how words of the medical vocabulary are constructed from their Latin and Greek sources.

Diuretic Therapy. The pharmacology of diuretic agents. By Alfred Vogl, M.D., Assistant Professor of Clinical Medicine, New York University College of Medicine, New York City. With a Foreword by Arthur M. Fishberg, M.D. 248 pages. Baltimore: The Williams and Wilkins Company, 1953. Price $5.00.

This is a new book dealing with a restricted but widely used group of therapeutic agents. A pioneer in the field of mercurial diuretics whose experience covers more than a third of a century, Dr. Vogl approaches his subject in the manner of the seasoned, thoughtful clinician. Included are an instructive consideration of the pathogenesis and differential diagnosis of edema, the pharmacology of diuretic drugs, descriptions of low salt diets, and a valuable bibliography. Except for the carbonic anhydrase inhibitor as a diuretic agent, the advent of which has occurred since the preparation of the manuscript apparently, the book deals with the wide range of agents that have been used to promote diuresis, and evaluates them critically. Physicians will find this book a readable and well published aid in this important field of therapeutics.

Pituitary Chromophobe Adenomas. A Clinical Study of the Sellar Syndrome. By John I. Nurnberger, M.D., Research Associate, The Institute of Living, and Assistant Clinical Professor of Medicine (Neurology), Yale University School of Medicine; and Saul R. Korey, M.D., Associate Professor of Neurology, The School of Medicine, Western Reserve University. 282 pages. New York: Springer Publishing Company, Inc., 1953. Price $7.00.

This monograph is based on a series of 117 patients admitted to the Neurological Institute of New York and the Columbia-Presbyterian Medical Center from 1929-1948, all diagnosed as having a chromophobe adenoma of the pituitary. Of these, 52 were verified histologically, while the others were clinical diagnoses. The viewpoint is chiefly that of a neurologist, although considerable space is devoted to endocrinology and pathology. Additional cases were added to the pathological series which were not studied clinically. The value of the book is comparable to that derived from any statistical study of a large series of cases in a rare disease. Particularly of value to the practicing physician is the final section on therapy and recommendations concerning the difficult decision of when to use radiation or surgery.

Rheumatic Diseases: Diagnosis and Treatment. By Eugene F. Traut, M.D., F.A.C.P., Associate (Rush) Clinical Professor of Medicine, University of Illinois. 942 pages with 192 illustrations. St. Louis: The C. V. Mosby Company, 1952. Price $20.00.

This is an excellent book covering the entire group of diseases having prominent rheumatic manifestations. The initial chapter of etiology, classification, and pathology should be studied by anyone attempting to diagnose and treat a rheumatic symptom. There are fifty-one separate chapters, one for each separate disease, (gout, osteoporosis, rheumatic fever, and so on) as well as chapters covering a specific location (rheumatic manifestations of the back, of the feet, *et cetera*). Hundreds of excellent references are conveniently listed at the bottom of the pages where they are cited instead of at the end of the chapters. There

is a section on psychogenic rheumatism, physical medicine, surgical treatment, ocular manifestations, and many other related aspects of rheumatism. The use of ACTH and cortisone is discussed in detail with emphasis on complications and contraindications. Employment of the new uricosuric agent in the interval management of gout, and the injection of hydrocortisone locally were evidently too recent to be included.

Treatment of Toxic Goiter With Radioactive Iodine. A Monograph in American Lectures in Endocrinology. By Lindon Seed, M.D., Director, Isotope Laboratory, Grant Hospital; and Theodore Fields, M.S., Assistant Director, Radioisotope Laboratory, Hines Hospital. Edited by Willard O. Thompson, M.D., Clinical Professor of Medicine, University of Illinois College of Medicine; Editor, Journal of the American Geriatrics Society, Chicago, Illinois. Publication Number 197, American Lecture Series. 116 pages with illustrations. Springfield, Illinois: Charles C. Thomas, Publisher, 1953. Price $3.75.

This excellent monograph contains background material on radioactivity, a complete section on organizing a radioisotope clinic and specific instructions to the physician on how to prepare for the management of such a clinic.

The theoretical aspects of I^{131} and its duration and mechanism of action are discussed, with dangers to both physician and patient. Indications and contraindications are established.

This is a very good presentation of the use of I^{131} in clinical medicine.

Electrical Methods of Blood-Pressure Recording. A Monograph in American Lectures in Medical Physics. By Frank W. Noble, M.E.E., National Heart Institute, National Institutes of Health, Public Health Service, Federal Security Agency, Bethesda, Maryland. Edited by Otto Glasser, Ph.D., Department of Biophysics, Cleveland Clinic Foundation, Cleveland, Ohio. Publication Number 155, American Lecture Series. 56 pages with illustrations. Springfield, Illinois: Charles C. Thomas, Publisher, 1953. Price $3.00.

This monograph does not include the actual methods of recording blood pressure as much as it presents a maze of formulae and equations. There is an analysis of the components and qualifications of the various instruments utilized to measure the blood pressure. The mathematics is very advanced and only a limited number of readers will be able to understand or profit from the material included.

Classics in Clinical Dermatology with Biographical Sketches. By Walter B. Shelley, M.D., Ph.D. and John T. Crissey, M.D., University of Pennsylvania. 485 pages, 111 illustrations. Springfield, Illinois: Charles C. Thomas, Publisher, 1953.

The authors have prepared a chronological selection of descriptive clinical dermatology from the time of Robert Willan in 1796 to the present day. A short but revealing biographical sketch precedes each of the ninety-five original articles as written by the founders of modern dermatology.

The gradual development of the field of dermatology as we know it today is traced from the attempts of Willan to lay down a basic vocabulary. This made exact dermatologic description possible through the years and helped establish each new disease entity.

Introduction to the articles by a short summary of the life and accomplishments of each author illustrates the variability in temperament, ability, and background of those on whom the progress of dermatology depended. From the terse yet complete accounts of Thomas Bateman to the voluminous and detailed descriptions of Jean Louis Brocq we see the common denominator of accuracy and meticulous study. The delightful sidelights into the personality of famous dermatologists add to the enjoyment of the reader. Presentation of Alibert as a showman conducting his clinics in the garden of St. Louis is contrasted with a description of Bowen, the recluse, suffering when called upon to lecture. This human presentation differs from the dry recitation of vital statistics characteristic of so many medical biographical sketches.

The clinical material is presented exactly as it was in the original form with care taken to preserve the meaning when translation was necessary. For this reason, the book is valuable as a reference both dermatologically and historically. The authors have been successful in presenting the background of dermatologic literature in a highly entertaining and informative fashion. The volume is recommended for anyone interested in dermatology.

The Year Book of Drug Therapy. (1953-1954 Year Book Series). Edited by Harry Beckman, M.D., Director, Departments of Pharmacology, Marquette University Schools of Medicine and Dentistry. 538 pages with illustrations. Chicago: The Year Book Publishers, Inc., 1954. Price $6.00.

Like its predecessors, this book contains abstracts of selected papers on drug therapy published in the medical periodical literature. The period between August, 1952, and August, 1953, has been covered, and several foreign publications are included in addition to American journals. All summaries are arranged under subheadings, according to the various specialties. The editor has fulfilled his responsibility splendidly by contributing bracketed comments on many reports and an informative introduction describing significant progress in drug treatment during the past year. The articles have been selected with care. The book will be a convenient aid in keeping abreast of current developments in drug therapy.

Salmonellae and Shigellae. Laboratory Diagnosis Correlated with Clinical Manifestations and Epidemiology. By Alfred J. Weil, M.D., The Bronx Hospital, New York; and Ivan Saphra, M.D., The Beth Israel

Hospital, New York. 252 pages, with 29 illustrations. Springfield, Illinois: Charles C. Thomas, Publisher, 1953. Price $7.75.

This text, written by bacteriologists who have devoted prolonged study to Salmonella and Shigella, will be of interest to other bacteriologists engaged in similar activities. A major portion of the text is devoted to the detailed description of the genera and to the problems of serological differentiation. Data of importance to workers concerned with problems in this field are presented. Two chapters are concerned with procedures in the isolation and identification of the organisms but these cannot be recommended as a practical guide for bacteriologists in public health or clinical laboratories. One chapter only is devoted to clinical manifestations and epidemiology. This is designed to make the information in these fields readily available to bacteriologists. The authors, though physicians, clearly have not worked recently in the clinical field. They describe, for example, the cellophane swab employed for the collection of pinworm ova as the rectal swab to be used in the collection of specimens for the examination for bacterial pathogens. This would appear to be as unsatisfactory as it would be uncomfortable. Moreover, they repeat without evaluation the opinion that perhaps as many as 10 per cent of the untreated cases of shigellosis may develop a chronic ulcerative colitis. The clinical and epidemiological information is drawn from the literature, and is not evaluated in the light of personal experience in the clinic and field. For the bacteriologist, this will be a useful summary, but it was not designed for and would not be particularly useful to the clinician or epidemiologist. The text, while excellently printed, contains more typographical errors than can be considered permissible. Furthermore, it could have been improved materially by a more careful editing, which for the scientific writer is exasperating, but helpful. This is primarily a volume on the bacteriology of Salmonella and Shigella; those expecting to find an unusually effective correlation of laboratory diagnosis with clinical manifestations and epidemiology will be disappointed.

Modern Clinical Psychiatry. By Arthur P. Noyes, M.D., Superintendent, Norristown State Hospital, Norristown, Pennsylvania. Fourth Edition. 609 pages. Philadelphia and London: W. B. Saunders Company, 1953.

This outstanding textbook of psychiatry has been carefully revised and improved in every respect except for the printing type, which is less readable than that of many paper-bound novels. The fundamentals of psychiatry are considered in greater detail, and recent developments, for instance in such fields as child psychiatry, drug addiction, psychosurgery, and group therapy, are evaluated in this edition. The contents of the book have been reorganized in accordance with the new classification of mental disorders adopted by the American Psychiatric Association. This is an excellent introduction to psychiatry, which presents principles of diagnosis and treatment with reasonable completeness and without prejudice against any school of thought.

Mother and Baby Care in Pictures. By Louise Zabriskie, R.N., Director, Maternity Consultation Service, New York City. Fourth Edition. 244 pages with illustrations. Philadelphia: J. B. Lippincott Company, 1953. Price $3.00.

This well-written, profusely illustrated and excellent book contains the answers to the innumerable questions asked by every expectant mother during her first pregnancy. Information concerning childbirth usually taught in parents' classes has been covered, including nutrition and hygiene of pregnancy, mother's and baby's clothes, nursery needs, and preparations for home and hospital delivery. Several chapters are devoted also to care of mother and child after delivery, and to the bathing, dressing, and feeding of the infant and its development during the first year of life. The book is sound in that it endeavors to complement the physician's advice rather than replace it. Additions and changes have been made in this edition, with new sections on natural childbirth, demand feeding, and communicable diseases.

Books Received

A Primer of Congestive Heart Failure. By George E. Burch, M.D., Henderson Professor of Medicine, Tulane University School of Medicine, Physician-in-Chief, Tulane Unit, Charity Hospital, Consultant in Cardiovascular Diseases, Ochsner Clinic, and Visiting Physician, Touro Infirmary, New Orleans, Louisiana. 126 pages. Springfield, Illinois: Charles C. Thomas, Publisher, 1954. Price $4.00.

Acute Renal Failure. A Monograph in American Lectures in Internal Medicine. By Arthur Grollman, Ph.D., M.D., F.A.C.P., Professor and Chairman, Department of Experimental Medicine; Lecturer in Pharmacology and Toxicology, Southwestern Medical School of the University of Texas; Attending Physician, Parkland Hospital; Consultant in Internal Medicine, Baylor University Hospital, Dallas, Texas. Publication Number 192, American Lecture Series. 92 pages, illustrated. Springfield, Illinois: Charles C. Thomas, Publisher, 1954. Price $4.00.

Practical Electrocardiography. By Henry J. L. Marriott, M.D., Associate Professor of Medicine, University of Maryland; Assistant Cardiologist, Mercy Hospital, Baltimore. 171 pages, illustrated. Baltimore: The Williams and Wilkins Company, 1954. Price $5.00.

The Billroth I Gastric Resection. With Particular Reference to the Surgery of Peptic Ulcer. By Horace G. Moore, Jr., M.D., Wilmington, North Carolina; Diplomate, American Board of Surgery; and Henry N. Harkins, M.D., Ph.D., F.A.C.S., Professor of Surgery and Executive Officer of the Department of Surgery, University of Washington School of Medicine, Seattle. First Edition. 175 pages, illustrated. Boston: Little, Brown and Company, 1954. Price $7.50.

A Manual on Cardiac Resuscitation. By Robert M. Hosler, M.D., F.A.C.S., Cleveland, Ohio. 183 pages, illustrated. Springfield, Illinois: Charles C. Thomas, Publisher, 1954. Price $4.00.

Surgical Infections. Prophylaxis. Treatment. Antibiotic Therapy. By Edwin J. Pulaski, M.D., D.M.Sc. (Surgery), Lieutenant Colonel, Medical Corps, United States Army; Deputy Director, Division of Surgery, Walter Reed Army Medical Center; Assistant Chief, Surgical Service, Walter Reed Army Hospital, Washington, D. C. 315 pages, illustrated. Springfield, Illinois: Charles C. Thomas, Publisher, 1954. Price $7.75.

Thoracic Surgery. By Richard H. Sweet, M.D., Associate Clinical Professor of Surgery, Harvard University Medical School, Boston. Second Edition. 381 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1954. Price $10.00.

Psychosomatic Case Book. Roy R. Grinker, M.D., Director, Institute for Psychosomatic and Psychiatric Research and Training of the Michael Reese Hospital; Clinical Professor of Psychiatry, University of Illinois, College of Medicine, Chicago;

and Fred P. Robbins, M.D., Associate Psychiatrist, Michael Reese Hospital; Staff Member, The Chicago Institute for Psychoanalysis, Chicago. 346 pages. New York: The Blakiston Company, Inc., 1954. Price $6.50.

Lectures on the Thyroid. By J. H. Means, M.D., Jackson Professor of Clinical Medicine Emeritus, Harvard University; Former Chief of Medical Services, Massachusetts General Hospital; Physician, Massachusetts Institute of Technology, Boston. 113 pages, illustrated. Cambridge, Massachusetts: Harvard University Press, 1954. Price $3.00.

Carcinoma of the Colon. By Leland S. McKittrick, B.S., M.D., F.A.C.S., Clinical Professor of Surgery, Harvard Medical School; Surgeon-in-Chief, New England Deaconess Hospital; and Frank C. Wheelock, Jr., A.B., M.D., F.A.C.S., Assistant in Surgery, Harvard Medical School, Boston. 94 pages, illustrated. Springfield, Illinois: Charles C. Thomas, Publisher, 1954. Price $3.25.

Clinical Orthoptic Procedure. A Reference Book on Clinical Methods of Orthoptics. By William Smith, O.D., Associate Instructor in Optometry and Instructor of Orthoptics and Visual Training, Massachusetts College of Optometry, Boston. Second Edition. 524 pages, illustrated. St. Louis: The C. V. Mosby Company, 1954. Price $10.00.

The Roentgenologist in Court. By Samuel Wright Donaldson, M.D., F.A.C.R., Roentgenologist, St. Joseph Mercy Hospital, Ann Arbor, Michigan. Second Edition. 348 pages. Springfield, Illinois: Charles C. Thomas, Publisher, 1954. Price $7.75.

The Thyroid. A Physiological, Pathological, Clinical and Surgical Study. By T. Levitt, M.A., F.R.C.S. (Eng.), F.R.C.S.I. (Eng.), Hunterian Professor of the Royal College of Surgeons of England, London. 606 pages, illustrated. Baltimore: The Williams and Wilkins Company, 1954. Price $20.00.

Pneumonia. A Monograph in the Bannerstone Division of American Lectures in Chest Diseases. By Hobart A. Reimann, M.D., Visiting Professor of Medicine, The American University of Beirut, Lebanon. Publication Number 160, American Lecture Series. 236 pages, illustrated. Springfield, Illinois: Charles C. Thomas, Publisher, 1954. Price $5.75.

Nerve Impulse. Transactions of the Fourth Conference, March 4, 5 and 6, 1953, Princeton, New Jersey. Edited by David Nachmansohn, M.D., Associate Professor of Neurology, Columbia University College of Physicians and Surgeons, New York. 224 pages, illustrated. New York: Josiah Macy, Jr. Foundation, 1954. Price $4.00.

Medical Progress 1954. A Review of Medical Advances During 1953. Edited by Morris Fishbein, B.S., M.D., Phar.D., Clinical Assistant Professor of Medicine, University of Illinois College of Medicine, Chicago. 345 pages. New York: The Blakiston Company, Inc., 1954. Price $5.00.

Acute Anuria. A Study Based on Renal Function Tests and Aspiration Biopsy of the Kidney. By Claus Brun, Copenhagen. 215 pages, illustrated. Copenhagen: Ejnar Munksgaard, Ltd., 1954.

The Hepatic Circulation and Portal Hypertension. By Charles G. Child, III, M.D., Professor of Surgery, Tufts College Medical School; Chairman, Department of Surgery, New England Center Hospital. 444 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1954. Price $12.00.

The Dynamics of Virus and Rickettsial Infections. International Symposium sponsored by the Henry Ford Hospital, Detroit, Michigan and held at the Hospital, October 21, 22, and 23, 1953. Edited by Frank W. Hartman, M.D.; Frank L. Horsfall, Jr., M.D.; and John G. Kidd, M.D. 461 pages, illustrated. New York: The Blakiston Company, Inc., 1954. Price $7.50.

Neurosurgery of Infancy and Childhood. By Franc D. Ingraham, M.D., Associate Professor of Surgery, Harvard Medical School, Boston, Massachusetts; and Donald D. Matson, M.D., Assistant Professor of Surgery, Harvard Medical School; Neurosurgeon, Children's Medical Center, Boston. 456 pages, illustrated. Springfield, Illinois: Charles C. Thomas, Publisher, 1954. Price $15.00.

Reconstructive Surgery of the Eyelids. By Wendell L. Hughes, M.D., F.A.C.S., Hempstead, New York. Second Edition. 260 pages, illustrated. St. Louis: The C. V. Mosby Company, 1954. Price $8.50.

Energy Metabolism and Nutrition. By Professors Raymond W. Swift and Cyrus E. French, Department of Animal Nutrition, The Pennsylvania State University. 264 pages, illustrated. Washington, D. C.: The Scarecrow Press, 1954. Price $5.75.

Southern Medical News

ALABAMA

The Southeastern Surgical Congress, with headquarters in Atlanta, Georgia, held its 22nd annual assembly in Birmingham, March 8-11, and installed Dr. Duffy Hancock, Louisville, Kentucky, president; and elected Dr. Donald S. Daniel, Richmond, Virginia, president-elect; Dr. H. L. Brockmann, High Point, North Carolina, vice-president. Drs. B. T. Beasley and A. H. Letton, Atlanta, Georgia, will continue as secretary-director general and treasurer, respectively. The attendance was the largest in the history of the Congress.

Dr. H. Earle Conwell, Birmingham, is chairman of the section on the Standard Nomenclature of Fractures of the Musculoskeletal area of the American Medical Association publication *Standard Nomenclature of Diseases and Operations.* Dr. Conwell was appointed by Dr. Richard J. Plunkett, editor of the Division of Standardization Nomenclature of Diseases and Operations.

Dr. Wilmot Littlejohn, Birmingham, has been named Alabama state chairman for Emory University School of Medicine's two-day centennial celebration in Atlanta, Georgia, October 5-6. The program will feature a series of lectures by nationally known physicians.

Alabama Pediatric Society will hold its annual meeting in Mobile, Admiral Semmes Hotel, April 14.

The 35-bed D. W. McMillan Hospital, Brewton, constructed under the $625,503 Hill-Burton Act, was dedicated March 14. The air-conditioned hospital, with facilities for white and Negro patients, can be expanded to house 75 beds.

ARKANSAS

Dr. Fount Richardson, Fayetteville, has been appointed chairman of the 1954 Nominating Committee of the American Academy of General Practice.

Dr. Grady W. Reagan, Jr., who was recently released from military service, has joined his father in the practice of urology in the Donaghey Building, Little Rock.

Dr. Curry B. Bradburn, Jr., a graduate of the University of Arkansas School of Medicine, who completed a urological residency at the Ochsner Clinic, New Orleans, Louisiana, has joined Dr. Grady W. Reagan, Little Rock, for the practice of his specialty.

Dr. W. H. Poyner has moved into new offices at Berryville.

Dr. Gerald Pearce has located at Heber Springs.

DISTRICT OF COLUMBIA

American Society of Maxillofacial Surgeons will meet in Washington, April 25-28.

American Academy of Neurology will meet in Washington, Shoreham Hotel, April 29-May 1.

The sixth annual symposium on Recent Advances in the Study of Venereal Diseases will be held in the auditorium of the Department of Health, Education, and Welfare, Washington, April 29 and 30.

Interim meeting, District 5, American Academy of Obstetrics and Gynecology, will be held in Washington, Mayflower Hotel, May 10-11. The district comprises the states of Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia, and the District of Columbia.

Dr. George R. Callender, Brig. Gen., U. S. Army, retired, Washington, was elected president of the American Academy of Tropical Medicine at its recent annual meeting held in Louisville, Kentucky; and Dr. James J. Sapero, Capt., U.S.N., Washington, vice-president.

George Washington University Hospital, Washington, is the recipient of a $5,000 grant by the Washington Multiple Sclerosis Society, which is the local branch of the National Multiple Sclerosis Society, for the establishment of a diagnostic and rehabilitation center for victims of multiple sclerosis.

Georgetown University School of Medicine, Washington, has received five new grants from the United States Public Health Service, totaling $72,599. Two projects, supervised by Dr. Francis M. Forster, Dean of the School of Medicine, are $24,500 for a teaching and training grant in neurology; and $16,000 for an evaluation of new anticonvulsant drugs by the Georgetown Epilepsy Clinic. A grant of $7,500, under the super-

vision of Drs. Charles R. Rath and Laurence H. Kyle, will be used for a study of ascorbic acid metabolism in leukemia; $15,984 by Dr. Charles A. Hufnagel for a cardiovascular replacement project; and $8,865 by Dr. Roger Baker for a study of the mechanism of abnormal calcification, with emphasis on kidney stones.

Dr. Frank Brown Berry, New York City, has been appointed Assistant Secretary of Defense for Health and Medical Affairs, succeeding Dr. Melvin A. Casberg, who announced his resignation on January 13 and who is returning to private practice after serving in the office of Assistant Secretary for two years.

Washington Psychiatric Society at its sixth annual meeting installed Dr. Douglas Noble, president; and elected Dr. Marshall deG. Ruffin, president-elect; Dr. Seymour J. Rosenberg, secretary; and Dr. Norman Taub, treasurer.

Dr. Worth B. Daniels, Washington, was elected vice-president of the Society of Medical Consultants to the Armed Forces at its eighth annual meeting held in Washington recently.

FLORIDA

American College of Allergists will hold its next meeting in Miami Beach, Rooney Plaza Hotel, April 5-10.

Dr. M. Eugene Flipse, Miami, has been recalled to active duty from his practice and is now head of the Chest Service at the U. S. Naval Hospital, Bethesda, Maryland.

Dr. A. Zeigler McPherson, pediatrician, has been named medical staff director of a clinic formally opened late last year in Tampa to provide diagnosis and therapeutic treatment for the cerebral palsied.

Drs. Thomas H. Bates and Louis G. Landrum, Lake City, have been elected to the board of directors of the Lake City-Columbia County Chamber of Commerce for 1954.

Dr. Walter R. Newbern, West Palm Beach, has been elected chairman of the Palm Beach County Unit of the American Cancer Society. Dr. Willard F. Ande, West Palm Beach, is vice-chairman.

Dr. Richard C. Cummings, Ocala, has been elected mayor of that city.

Drs. Theodore M. Berman, Miami Beach, and Oliver P. Winslow, Jr., Miami, have completed an intensive short course in radiation therapy at the Continuation Study Center of the University of Minnesota, Minneapolis.

Dr. William E. Van Landingham, West Palm Beach, city physician for thirty years, has been awarded the Civitan's Outstanding Services Award for 1953.

Dr. Joseph H. Lucinian, Miami, recently attended the meeting of the Pan American Medical Association at Caracas, Venezuela, and Havana, Cuba.

Florida Tuberculosis and Health Association will hold its next annual conference in St. Petersburg, Sereno Hotel, April 9-10.

Dr. Homer Pearson, Miami, will serve as general chairman of the committee on arrangements at the clinical meeting of the American Medical Association to be held in Miami, November 29-December 3. Dr. R. B. Chrisman, Jr., will serve as co-chairman.

The Florida Medical Committee for Better Government will hold a meeting at the Hollywood Beach Hotel, Miami, April 25, just prior to the meeting of the Florida Medical Association.

Dr. Daniel Kindler, Miami, has been elected to membership in the American Academy of General Practice.

Dr. Seymour W. Rubin has opened an office in the DuPont Building, Miami, practice limited to urology.

The Third Annual Seminar and Conference on Cancer Cytology, to be conducted by the Cancer Institute at Miami, will be held on April 21-24. Dr. Joseph S. Stewart, Miami, is chairman of this Seminar, and members of his committee are Dr. Richard Fleming, Dr. Ralph W. Jack and Dr. Milton Coplan. Dr. J. Ernest Ayre is director of the Cancer Institute.

GEORGIA

The Southeastern Surgical Congress held its annual meeting in Birmingham, Alabama, the middle of last month. Dr. B. T. Beasley, Atlanta, was re-elected secretary-director general and Dr. A. H. Letton, Atlanta, was re-elected treasurer. The Silver Anniversary meeting of the Congress will be held in Atlanta next March.

The March issue of the *Journal of the Medical Association of Georgia* is dedicated to the memory of Dr. Crawford W. Long and his discovery of ether as an anesthetic—Jefferson, Georgia, March 30, 1842. Outstanding physicians in the field of anesthesia contributed scientific articles for this memorial issue.

The proposed Georgia Baptist Hospital professional building in Atlanta is part of the expansion program under way at Georgia Baptist. The design of the building has won an Award Citation (Commerce Category) in an architectural design competition conducted by a national architectural magazine.

Drs. F. Kells Boland, Jr., Joseph H. Boland, William O. Barnett and George A. Tootle announce the opening of their new offices in Atlanta.

Georgia Heart Association has named Dr. Ellison R. Cook, Savannah, president-elect; Dr. Goodloe Y. Erwin, Athens, vice-president; Dr. Lamont Henry, Atlanta, secretary; and James D. Robinson, Jr., Atlanta, treasurer.

St. Joseph's Hospital, Savannah, has elected to its staff Dr. Thomas A. McGoldrick, president; Dr. M. M. Schneider, vice-president; W. W. Osborne, secretary; and Dr. G. W. Goldenstar, treasurer.

Dr. James Roberts and his wife, Dr. Jessie Roberts, Sandy Springs, have opened offices for the general practice of medicine.

Dr. Jack C. Norris, Atlanta, is author of the recently published book, "Gleanings from a Doctor's Eye."

Dr. Samuel S. Ambrose, Atlanta, has opened an office for the practice of urology.

Dr. R. L. Carter, Thomaston, has retired after thirty-three years of practice in Thomaston.

Dr. Vincent J. Cirincione, Savannah, who recently returned from duty with the armed forces, has opened offices in Savannah, for the practice of dermatology.

Dr. John K. Davidson, Columbus, is editor of the new *Bulletin of the Muscogee County Medical Society;* and Drs. Henry H. Brill, A. B. Conger, William C. Cook and Luther J. Roberts are associate editors.

A portrait of Dr. Sam M. Howell, Cartersville, was recently unveiled in the Howell-Quillian Clinic, Cartersville, of which he was one of the founders.

Dr. Julian L. Lokey, Thomson, is the new medical director of the Caswell School of Kingston, North Carolina, in charge of teaching and clinical research in the department of internal medicine.

New faculty appointments at Emory University School of Medicine, Atlanta, are: Dr. Fred B. Hodges, Jr., voluntary instructor in surgery; and Dr. Robert E. Lane, instructor in obstetrics and gynecology.

KENTUCKY

Dr. J. Duffy Hancock, Louisville, was installed president of the Southeastern Surgical Congress at their annual meeting in Birmingham, Alabama, last month. Dr. Hancock will preside over the Silver Anniversary meeting to be held in Atlanta, Georgia next March.

Kentucky Obstetrical and Gynecological Society will hold its seventh annual meeting in Frankfort, Capitol Hotel, April 2-3.

Kentucky Chapter of the American Academy of General Practice will hold its third annual meeting in Cincinnati, Ohio, Netherland Plaza Hotel, April 21-22. Dr. Keith P. Smith, Corbin, is president.

Kentucky Surgical Society will hold its next meeting at French Lick, Indiana, May 15, under the presidency of Dr. W. Vinson Pierce, Covington.

The Kentucky Surgical Society has made two annual appropriations with this year's gift totaling $1,000 to the McDowell Home. Dr. Francis M. Massie, Lexington, is secretary-treasurer of this society.

Kentucky Society of Anesthesiologists at a recent meeting held in Louisville installed Dr. Willard D. Bennett, president; and elected Dr. Robert P. Bergner, Louisville, president-elect; Dr. Shelton H. Mann, vice-president; and Dr. Fred A. Sawhill, secretary-treasurer.

The Pediatric Postgraduate Course, sponsored by the Kentucky State Medical Association, the University of Louisville School of Medicine, and the American Academy of Pediatrics will be held in Louisville, Children's Hospital, May 6-June 24.

Dr. D. M. Griffith, Owensboro, has retired after practicing 66 years.

Dr. Vernon Woodard Corder, formerly of Louisville, has opened an office in Oklahoma City, Oklahoma.

Dr. Robert W. Lykins has become associated with Drs. Sam Clark, Willard Bennett and James R. Flautt, Louisville.

Dr. Claude M. Talbott, recently released from service with the United States Air Force, is taking a residency in eye, ear,

nose and throat at the Veterans Administration and Children's Hospital, Louisville.

Dr. Lewis B. Clayton, formerly of Virgie, has opened an office at Corbin.

Dr. Thomas Luis Boneta, formerly of Richmond, has joined the surgical staff of Clinton County Memorial Hospital, Albany.

Dr. Thomas W. Clark has opened an office in the Fincastle Building, Louisville, for the practice of internal medicine.

Dr. Charles Lemuel Tuttle, has become associated with the Houston-McDevitt Clinic, Murray, for the practice of obstetrics and gynecology.

Dr. John P. Hill, Jr., has become associated with the Somerset Clinic for the practice of urology.

Dr. James Black Jones, formerly of Verda, has opened an office in Memphis, Tennessee.

Dr. Everett Gerald Davis, formerly of Glasgow, is associated with the Midland Michigan Hospital Association.

LOUISIANA

Southwest Allergy Forum, Dr. Henry D. Ogden, president, will hold its next meeting in New Orleans, Roosevelt Hotel, May 9-11. Write Southwest Allergy Forum, 1441 Delachaise Street, New Orleans 15, for information, or directly to the Roosevelt Hotel for reservations.

Eye, Ear, Nose and Throat Hospital Alumni Association will hold its annual meeting in New Orleans, April 5-7.

Tulane University School of Medicine, New Orleans, has been awarded a $45,000 grant by the Edward G. Schlieder Educational Foundation for research in the university's biological and physics program.

The Association of Southeastern Biologists will hold its next annual meeting on the campus of Louisiana State University, Baton Rouge, April 15-17.

Dr. James T. Nix, New Orleans, is a member of the editorial board of the *American Journal of Gastroenterology*, formerly *The Review of Gastroenterology*.

Dr. Ernest Carroll Faust, (Ph.D.), the William Vincent professor of tropical diseases and hygiene, Tulane University School of Medicine, New Orleans, is one of seven medical clinicians and specialists in the United States invited by the West German Republic to study public health problems and services there. He arrived in Frankfort on February 8 and remained in West Germany until March 8.

A $350 gift has been presented to the Tulane University School of Medicine, New Orleans, by the Orleans Parish Club of Registered Republican Women as a memorial to the late Senator Robert A. Taft, who died of cancer in 1953.

Dr. Isidore Cohn, Sr., has been invited to address the International Congress on Medical Education to be held in Rome, Italy, September 1954.

Dr. Nelson K. Ordway, New Orleans, has been appointed member of the Research Committee of the National Association for Retarded Children, Inc.

DePaul Sanitarium, New Orleans, has installed Dr. Frederic W. Brewer as president of the medical staff. Dr. Louis J. Dubos is vice-president; and Dr. Hunter P. Harris, secretary-treasurer.

New Orleans Academy of Ophthalmology has elected Dr. George M. Haik, New Orleans, president; Dr. William McDonald Boles, vice-president; Dr. Gus Hahn, secretary; and Dr. William B. Clark, treasurer.

Touro Infirmary, New Orleans, has elected Dr. Walter E. Levy, chairman of the medical staff; Dr. Sydney Jacobs, vice-chairman; and Dr. J. D. Russ, secretary.

MARYLAND

American Association for the Study of Neoplastic Diseases will hold its next meeting at Baltimore, Lord Baltimore Hotel, April 29-30.

Dr. Robert N. Cooley, assistant professor of radiology, Johns Hopkins University School of Medicine, Baltimore, has been appointed professor of radiology and chairman of the department at the University of Texas Medical Branch, Galveston, Texas.

Dr. Christopher T. Bever, formerly director of the Montgomery County Mental Hygiene Clinic, Rockville, has accepted a position as associate professor, Department of Psychiatry, University of North Carolina School of Medicine, Charlottesville. He will also be associate attending physician, North Carolina Memorial Hospital, and director of the Psychiatric Outpatient Research, Training and Treatment Center.

Dr. William F. Windle has been appointed Chief of the Laboratory of Neuroanatomical Sciences of the National Institute of Neurological Diseases and Blindness as announced by Dr. Leonard A. Scheele, Surgeon General of the Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda.

MISSISSIPPI

The February issue of the *Mississippi Doctor* was designated the Memphis (Tennessee) issue. Dr. Harwell Wilson, Memphis, was responsible for securing the papers for that issue of the journal.

Mississippi Heart Association, headed by Dr. W. K. Purks, Vicksburg, president, has $100,000 as the goal in the fourth campaign for the Mississippi Chapter. Dr. Arthur C. Guyton, Oxford, is president-elect of the Mississippi Chapter; and Dr. J. Manning Hudson, Jackson, secretary.

Dr. Beverley E. Smith has opened offices in Jackson for the practice of neuropsychiatry.

Some forty physicians, members of the Issaquena-Sharkey-Warren Counties Medical Society, gave without charge all professional services rendered after the devastating tornado which left scores dead and hundreds injured in Vicksburg. The city's four hospitals were undamaged.

MISSOURI

The Federation of Child Health Centers, Kansas City, recently honored several physicians at a dinner, these pediatricians having contributed about 475 hours of their time to the several centers last year: Drs. Charles Eldridge, J. A. Tabris, John Aull, Mildred C. Duer, Eugene P. Chatman, Bruce P. McDonald, Gerald Hughes, Milton Dodge, James T. Van Biber and S. F. Cockerell.

Dr. D. W. Croom, a graduate of the University of Arkansas School of Medicine, Little Rock, is associated with Dr. C. T. Edmondson, Malden.

Staff members of the St. Louis city hospitals have petitioned for the organization of an Institute of Medical Education and Research, under the direction of Dr. Leo V. Mulligan. It would be a nonprofit organization intended primarily for the training of resident staffs and the conducting of research projects.

Dr. Luther M. Callaway, Kansas City, has retired from practice and has moved to Clearwater, Florida.

Dr. G. T. Stewart, Forsythe, has opened offices in Memorial Hospital, Mountain View.

The new Children's Hospital, an addition to Doctors Hospital, Poplar Bluff, opened early in the year and houses thirty beds. It is owned jointly by Drs. A. D. Markel, Fred J. Biggs, Jr., and Fred L. Kneibert. Dr. A. C. Parker is medical director of the new section.

Kansas City Trinity Lutheran Hospital, Kansas City, is launching their $1.2 million building program.

Drs. John Weaver and Max Musgrave are editors of the *Kansas City General Hospital Medical Bulletin*, which made its appearance early in the year.

Dr. B. Landis Elliott, Kansas City, is associated with Dr. N. V. Bolin, specialty limited to psychiatry.

The new Clay County Health Center has opened its quarters in the First National Bank Building, Liberty.

Dr. Harold Rapp is associated with Dr. Milton Shoss, Cape Girardeau, specialty limited to radiology.

Dr. W. A. Smith, Webster Groves, has retired from medical practice and has moved to Yuma, Arizona.

Dr. Richard M. Strong, Hannibal, who is associated with Dr. Francis E. Sultzman, has been notified of his certification by the American Board of Surgery.

Dr. Francis Dean, Fayette, has been made a partner in the Lee Hospital, the other partners being Drs. W. A. Bloom, W. J. Shaw and M. L. Leech.

Dr. Wallace H. Graham, Kansas City, has been named a vice-president of the Association of Military Surgeons. Dr. Graham also has been awarded the Honorary Legion of Honor by the Order of De Molay.

Dr. Ben Eiseman, formerly of the Department of Surgery, Washington University School of Medicine, St. Louis, is associate professor of surgery, University of Colorado School of Medicine and Chief of Surgical Service, Veterans Administration Hospital, Denver, Colorado.

Continued on page 42

SOUTHERN MEDICAL ASSOCIATION

Minutes of Forty-Seventh Annual Meeting

Atlanta, Georgia, October 26-29, 1953

OPENING ASSEMBLY

Public Session

Monday, October 26, 10:30 a.m.

The Opening Assembly was held at the Municipal Auditorium, Room 1 (Taft Hall), Atlanta, Georgia, Dr. Marion C. Pruitt, General Chairman, Atlanta, presiding.

Rev. H. Burton Trimble, Dean, Candler School of Theology, Emory University, Emory University, Georgia, gave the invocation.

Dr. William G. Hamm, President, Fulton County Medical Society, Atlanta, delivered an address of welcome for the Society.

Dr. William P. Harbin, Jr., President, Medical Association of Georgia, Rome, Georgia, delivered an address of welcome for the Association.

Dr. Fred E. Woodson, Chairman of Council, Southern Medical Association, Tulsa, Oklahoma, responded to the addresses of welcome.

A number of prominent business and professional men of Atlanta, representatives of the American Medical Association, Woman's Auxiliary to the American Medical Association and Woman's Auxiliary to the Southern Medical Association, who were seated at the speakers' table, were introduced by Dr. Allen H. Bunce, Chairman of the General Sessions Committee.

Dr. Walter C. Jones, President, Southern Medical Association, Miami, Florida, gave his President's Address entitled "Forgive Us Our Debts." Dr. Jones presided over the remainder of the session.

Dr. Walter B. Martin, President-Elect, American Medical Association, Norfolk, Virginia, gave an address entitled "Federal Medicine, Its Impact on the Medical Care of the American People," after being introduced by Dr. Louis M. Orr, Orlando, Florida.

Dr. Frank G. Slaughter, Jacksonville, Florida, gave an address entitled "The Beloved Physician", after being introduced by Dr. Walter C. Jones, President.

The meeting then adjourned *sine die*.

GENERAL SESSION

Wednesday, October 28, 8:00 p.m.

A General Session was held at the Atlanta Biltmore Hotel, Atlanta, Georgia, Dr. Walter C. Jones, Miami, Florida, President, presiding.

The President, Dr. Jones, called upon Dr. Fred E. Woodson, Tulsa, Oklahoma, Chairman of the Council, to report for the Council. Dr. Woodson gave a brief verbal report summarizing the work of the Council. It was then moved, duly seconded and carried without a dissenting vote that, since the Report of the Council would be printed in full in the SOUTHERN MEDICAL JOURNAL, it be approved as prepared by the Chairman.

The President, Dr. Jones, called upon Dr. Fred E. Woodson, Chairman of the Council, as Chairman of the Nominating Committee, to present the Report of the Committee:

The Council, as your Nominating Committee, presents for your consideration the following:

For President Elect: Dr. R. L. Sanders, Memphis, Tennessee.

For First Vice-President: Dr. W. Raymond McKenzie, Baltimore, Maryland.

For Second Vice-President: Dr. Marion C. Pruitt, Atlanta, Georgia.

Motion was made, duly seconded and carried without a dissenting vote, that the Report of the Nominating Committee be accepted and the nominees be elected by acclamation. The President, Dr. Jones, then presented the newly elected officers.

Dr. Alphonse McMahon, St. Louis, Missouri, President-Elect, was then duly installed President of the Southern Medical Association effective at the close of this annual meeting.

Dr. Fred E. Woodson, Chairman of the Council, presented the Past Presidents' Medal to Dr. Walter C. Jones, retiring President.

After announcements, the General Session adjourned and with the completion of the program on Thursday, the 1953 annual session of the Association adjourned.

The General Session was preceded by a dinner attended by five hundred and twenty-seven physicians, ladies and guests. Following the General Session there was a dance.

REPORT OF COUNCIL

Dr. Fred E. Woodson, Chairman of the Council, makes the following Report for the Council:

To the Members of the Southern Medical Association:

The Council of the Southern Medical Association met at Atlanta, Georgia, Dinkler-Plaza Hotel, Saturday, October 24, 1953, 12:30 p.m. and 9:00 p.m., and Tuesday, October 26, 1953, 12:30 p.m. Present: Dr. Fred E. Woodson, Chairman, Tulsa, Oklahoma; Dr. Olin S. Cofer, Vice-Chairman, Atlanta, Georgia; Dr. Lee F. Turlington, Birmingham, Alabama; Dr. Lowry H. McDaniel, Tyronza, Arkansas; Dr. Helen Gladys Kain, Washington, D. C.; Dr. C. A. Andrews, Tampa, Florida; Dr. A. Clayton McCarty, Louisville, Kentucky; Dr. Edwin H. Lawson, New Orleans, Louisiana; Dr. J. Morris Reese, Baltimore, Maryland; Dr. Grayson Carroll, St. Louis, Missouri; Dr. H. L. Brockmann, High Point, North Carolina; Dr. W. Thomas Brockman, Greenville, South Carolina; Dr. Charles R. Thomas, Chattanooga, Tennessee; Dr. Milford O. Rouse, Dallas, Texas; Dr. Waverly R. Payne, Newport News, Virginia; and Dr. Walter E. Vest, Huntington, West Virginia, sitting for Dr. V. E. Holcombe, by appointment of the President. Sitting with the Council: Dr. Walter C. Jones, President, Miami, Florida; Dr. Alphonse McMahon, President-Elect, St. Louis, Missouri; Dr. R. L. Sanders, First Vice-President, Memphis, Tennessee; Dr. J. Kelly Stone, Councilor-Elect from Louisiana, New Orleans; Dr. J. F. Lucas, Councilor-Elect from Mississippi, Greenwood; Dr. Henry H. Turner, Councilor-Elect from Oklahoma, Oklahoma City; and Mr. C. P. Loranz, Secretary-Manager, Birmingham, Alabama.

The Council meetings were called to order by the Chairman, Dr. Fred E. Woodson, Tulsa, Oklahoma, who presided.

The President, Dr. Walter C. Jones, presented the regrets of Dr. V. E. Holcombe, member of the Council from West Virginia, at not being able to attend the Atlanta meeting due to the illness of his wife. Dr. Jones appointed Dr. Walter E. Vest, Huntington, to represent West Virginia at this meeting in place of Dr. Holcombe.

Dr. Alphonse McMahon, President-Elect, St. Louis, Missouri, introduced the Councilors-Elect: Dr. J. F. Lucas, Greenwood, Mississippi; Dr. Henry H. Turner, Oklahoma City, Oklahoma; and Dr. J. Kelly Stone, New Orleans, Louisiana. These will become regular members of the Council at the close of this Atlanta meeting.

(1) REPORT OF EXECUTIVE COMMITTEE MEETING

The Executive Committee of the Council of the Southern Medical Association met in Birmingham, Alabama, Dinkler-Tutwiler Hotel, Saturday, February 7, 1953, at 9:00 a.m. Present: Dr. Fred E. Woodson, Chairman, Tulsa, Oklahoma; Dr. Olin S. Cofer, Vice-Chairman, Atlanta, Georgia; Dr. Milford O. Rouse, Dallas, Texas; and Ex-officio members, Dr. Walter C. Jones, President, Miami, Florida, and Dr. Alphonse McMahon, President-Elect, St. Louis, Missouri. Sitting with the Committee: Mr. C. P. Loranz, Secretary-Manager, Birmingham, Alabama, and Mr. Robert F. Butts, Assistant Secretary-Manager, Birmingham, Alabama. Dr. R. L. Sanders, First Vice-Presi-

dent, Memphis, Tennessee, was prevented from attending the meeting due to illness.

The Committee was called to order by the Chairman, Dr. Fred E. Woodson, who presided.

Mr. Charles O. Finley of Charles O. Finley and Company, Chicago, whom the Association at the Miami meeting voted to administer a Group Disability Insurance program for the members of the Association, to be underwritten by the Continental Casualty Company, conferred with the Committee and clarified some matters pertaining to the program. The Committee approved the plan of Mr. Finley for personal solicitation by representatives of his organization. Mr. Finley presented the plan he had mentioned to some members of the Committee to solicit members of the state and county medical societies in our territory not now members to become members of the Southern Medical Association at the same time soliciting applications for the disability insurance. The Committee approved the plan of Mr. Finley to solicit members for the Association in connection with a solicitation of application for disability insurance. To relieve the Association office of handling much of the details of the insurance program, the Association office was instructed, at its discretion, to pass on directly to Charles O. Finley and Company any correspondence in reference to the insurance program, the Charles O. Finley and Company to make proper acknowledgement to such correspondence; also the Association office was instructed, at its discretion, to send directly to Charles O. Finley and Company applications for insurance without a record being made in the Association office. The Committee urges all Councilors to push with vigor this insurance program both to physicians now members of the Association and those not now members but who are eligible to be members of the Association.

The Program plan for the Atlanta meeting was considered and thoroughly discussed. It was the judgment of the Committee that since the plans for the Dallas (1951) and Miami (1952) meetings were so well received by both the officers of the Sections and those in attendance at those meetings that it would be well to follow the same general program plan for the Atlanta meeting. Therefore, the Executive Committee recommends to the Council that the Atlanta meeting begin with a general public session on Monday forenoon, the Sections to begin Monday afternoon, meeting in half-day sessions on alternating days. The time and place for the last general session is to be left to the discretion of the local Executive Committee. The Sections were given the same amount of time as the two previous meetings as follows: General Practice 2, Medicine 3, Gastroenterology 2, Neurology and Psychiatry 2 (plus an extra session if Southern Electroencephalographic Society meets conjointly with Section), Pediatrics 3, Pathology 3, Radiology 2, Dermatology and Syphilology 2, Allergy 2, Physical Medicine and Rehabilitation 1, Industrial Medicine and Surgery 2, Surgery 3, Orthopedic and Traumatic Surgery 3, Gynecology 2, Obstetrics 2, Urology 3, Proctology 2, Ophthalmology and Otolaryngology 3, Anesthesiology 2, Public Health 2, and Medical Education and Hospital Training 2.

The Executive Committee suggests to the officers of each Section that there be on its program at least one paper, preferably at least two, of interest to men in general work, papers on diagnosis and treatment of conditions in the specialty represented by that Section.

The Committee instructed the Association officers to extend to Smith, Kline and French Laboratories an invitation to present a television program in connection with the Atlanta meeting, the program to be worked out by Smith, Kline and French Laboratories with the local Executive Committee for the Atlanta meeting.

An invitation from the Harris County Medical Society, Houston, to hold the 1955 meeting in Houston was read and docketed for consideration by the Council at the Atlanta meeting. The Committee expressed appreciation for this invitation.

In connection with the Report of the Editor as presented to the Council at the Miami meeting, and which was "referred to the Executive Committee for further investigation and report back to the Council," the Committee conferred informally with the Editor, Dr. M. Y. Dabney, and at another time with Dr. Dabney and two gentlemen whom he wished the Committee to meet and confer with, these conferences having to do with paragraphs 6 and 7 of the Report of the Editor. After careful consideration of all factors presented by Dr. Dabney the Executive Committee unanimously approved a motion that a small committee from within the Council be appointed by the Chairman of the Executive Committee to give careful consideration to the problems presented by Dr. Dabney and to actively seek to help in a solution. Dr. Dabney advised the Committee that both he and Mrs. Dabney wished to retire at the end of their present term of office which expires with the St. Louis meeting in November, 1954. It was moved and carried that this special committee be authorized to pay for part-time assistance to Dr. Dabney not to exceed $100.00 per month. The Chairman appointed the following on this special committee: Dr. R. L. Sanders, Memphis, Chairman, Dr. Olin S. Cofer, Atlanta, and Dr. Lee F. Turlington, Birmingham. It was moved and carried that other portions of the Report of the Editor be tabled.

There was a discussion on length of papers for publication in the SOUTHERN MEDICAL JOURNAL. It was brought out that the Constitution and By-Laws provide a maximum reading time of twenty minutes. The Committee recommended that the Council approve of a publicaion limit of 2,500 words for papers to be published in the SOUTHERN MEDICAL JOURNAL, this being approximately the maximum reading time as provided under the Constitution and By-Laws.

The Chairman read a communication in the nature of a Report from the President of the Woman's Auxiliary, Mrs. Richard F. Stover, Miami, outlining plans of the Auxiliary. The communication was received as information and the Committee expressed its appreciation for the splendid work being done under the direction of Mrs. Stover and the officers of the Auxiliary.

The Secretary-Manager reported that together with Mr. Chris H. King, of Neville, Brown and Regan, Certified Public Accountants for the Association, he had conferred with the Trust Department of the First National Bank in re an irrevocable retirement trust which the Association had approved to be set up. At the suggestion of the Trust Department the attorney for the Association, together with Mr. King, are now going into the legal phase of this retirement matter and are in course of preparing a proper legal instrument to be submitted to the Executive Committee.

The Executive Committee made an official visit to, and inspection of, the headquarters office of the Association in the Empire Building on Saturday afternoon. We were able to see the complete set-up and methods of handling the Association business. The equipment is good and the office space well utilized. It appears that the many details connected with the year-round conduct of our Association are being well managed by Mr. Loranz and his office personnel. Considering the importance of the position of Mr. Loanz, he has a very modest and unpretentious personal office. However, he made it plain that his office is and always has been a workshop and that he has just the kind of workshop he desired.

The Committee took time out in the middle of the day for a luncheon at The Club, atop of Red Mountain, arranged by the Secretary-Manager. A group of Birmingham physicians, officers and past officers of the Southern Medical Association in Birmingham, president of the local medical society, and the Dean of the Medical School, were guests of the Association for this luncheon.

The Committee adjourned around 5:00 p.m.

(Signed) FRED E. WOODSON, *Chairman*

(2) REPORT OF EXECUTIVE COMMITTEE MEETING

The Executive Committee of the Council of the Southern Medical Association met in Atlanta, Georgia, Dinkler-Plaza Hotel, October 24, 1953, at 8:00 a.m. Present: Dr. Fred E. Woodson, Chairman, Tulsa, Oklahoma; Dr. Olin S. Cofer, Vice-Chairman, Atlanta, Georgia; Dr. Milford O. Rouse, Dallas, Texas. Ex-officio members: Dr. Walter C. Jones, President, Miami, Florida; Dr. Alphonse McMahon, President-Elect, St. Louis, Missouri; and Dr. R. L. Sanders, First Vice-President, Memphis, Tennessee. Sitting with the Committee by invitation of the Chairman: Mr. C. P. Loranz, Secretary-Manager, Birmingham, Alabama.

The Committee was called to order by the Chairman, Dr. Fred E. Woodson, Tulsa, Oklahoma, who presided.

At the request of the Executive Committee the Secretary-Manager presented his report unofficially, the report to be transmitted later to the Council from the Board of Trustees. The Committee was giving consideration to the Group Disability Insurance Program. (See Report of Secretary-Manager for number of applications received for insurance.)

Mr. Calvin L. Smith, representing Charles O. Finley and Company, administrators of the insurance plan, and Mr. Richard Irwin, representing the Continental Casualty Company, underwriters of the insurance plan, met with the Executive Committee. Mr. Smith brought to the Committee the regret of Mr. Finley, Mr. Finley not being able to be present in person. Mr. Smith reported:

Two year policies issued without waivers, 969, and two year policies issued with waivers, 92, a total of 1,061. Five year policies issued without waivers, 903, and five year policies issued with waivers, 136, a total of 1,039. Two year rejections, 348, and five year rejections, 329, a total of 677. Members insured in other groups, 763, and members insured in Southern Medical Association and

other groups, 112, making a net participation from other groups of 651. Total applications received toward participation, 3,428. Total eligible membership, 8,000. Per cent of applicants toward participation requirement, thirty-five per cent. Total number insured under both plans, 2,100.

The report was thoroughly discussed and many questions asked. Mr. Smith was advised the Council may wish to see him, that there may be questions members of the Council would like to ask. Since out of the two campaigns applications were received through the Association office for only thirty-six per cent, Mr. Smith was asked if the underwriters would not approve another enrollment period and if another enrollment period was approved and the applications together with those who had previously applied brought the total up to fifty per cent, if those members who had been turned down or had riders on their policies could not be given full coverage. Mr. Smith agreed to take this up with both the underwriter and the administrator.

The Executive Committee approved in general the outline of the irrevocable trust for the retirement plan as prepared by the attorney and the auditors with certain additions, the details to be worked out as soon as they can be and the irrevocable trust completely and properly set up.

The Executive Committee recommends that an additional $25,000, purchase price, of bonds and an additional $6,000 from current cash be added to the irrevocable trust, making available now for the irrevocable trust $125,000, purchase price, of bonds and $18,000 in cash.

The Executive Committee recommends that $1,500.00 be made available to the Woman's Auxiliary of the Southern Medical Association for the year 1953-1954 and an additional $500.00 be made available to be added to the amount in the President's budget for her traveling expenses in 1952-1953. The Committee expressed its sincere appreciation to Mrs. Richard F. Stover, President of the Auxiliary, for the fine work she has done for the Auxiliary this past year.

The Special Editorship Committee, Dr. R. L. Sanders, Chairman, made the following report:

The Executive Committee of the Council at its meeting in Birmingham on February 7 authorized a special committee to assist Dr. M. Y. Dabney in the Editorial Department of the SOUTHERN MEDICAL JOURNAL, the committee to be appointed by the Chairman of the Executive Committee, Dr. Fred E. Woodson. The committee, composed of Dr. R. L. Sanders, Chairman, Memphis, Dr. Olin S. Cofer, Atlanta, and Dr. Lee F. Turlington, Birmingham, met with Dr. and Mrs. Dabney for luncheon in a private dining room, Tutwiler Hotel, Birmingham, Saturday, March 28, 1953 at 12:30 p.m.

The purpose of the Committee was stated by the Chairman, as follows: "This Committee was appointed for the purpose of considering further some of the phases of the report of Dr. M. Y. Dabney, Editor of the JOURNAL." Specifically, the Committee was named primarily to aid in the preparation of editorials for the JOURNAL and to assist the Executive Committee in finding a successor to Dr. Dabney.

After a long and informal discussion of the matter, the Committee made the following decisions, in which Dr. and Mrs. Dabney concurred: (1) That the Southern Medical Association, through its Secretary, Mr. C. P. Loranz, be authorized to pay for editorials prepared up to April 1, 1953, on the basis of $100.00 per month. (2) That further editorial aids be provided up to and including November 1953, not to exceed $100.00 per month. (3) That the Editor, Dr. Dabney, be given authority to employ such aid as is needed to meet the requirements of his department.

At this point, Dr. and Mrs. Dabney again urged that they be retired at the close of the annual meeting in 1954. The Committee assured them that its members, as well as the Executive Committee, would be constantly at work on this matter and in due time would recommend to the Council someone to succeed him. The Committee expressed profound appreciation of the fine service which Dr. and Mrs. Dabney have rendered to the JOURNAL of the Southern Medical Association and, through it, to the entire membership over a period of more than thirty years.

Chairman Woodson and President Jones having urged this Committee to look over the field carefully in an effort to find someone to succeed Dr. Dabney, the members have been working constantly on this matter to the present time. All the members of the Executive Committee have been similarly engaged, and our joint efforts are herewith reported.

Dr. Dabney was requested to collaborate with Dr. Turlington in an effort to locate someone in the city of Birmingham to assume the editorship of the JOURNAL. They were unable to find such a person. Dr. Rouse investigated Dallas, Fort Worth and other Texas cities, and was unable to find a suitable man. Dr. McMahon reported the same experience in St. Louis. Dr. Cofer investigated Atlanta and other cities, and Dr. Jones looked over the field in Miami; both gave a like report. It would seem, therefore, that the finding of a suitable editor is no easy task. The name of Dr. R. H. Kampmeier of Vanderbilt University was suggested. Accordingly, I made two trips to Nashville to interview Dr. Kampmeier, and was greatly impressed with him as a man and with his ability to do our work. Dr. Woodson flew to Nashville and also interviewed Dr. Kampmeier. All the other members of the Executive Committee except Dr. Jones have met Dr. Kampmeier and are familiar with his work. He is 54 years of age and is a cultured gentleman. He is Professor of Medicine at Vanderbilt University, has been teaching for a long time, and has been editing the *Journal of the Tennessee State Medical Association* for two years. He has also had considerable editorial experience in other journals. He is a voluminous writer and is stable and sound in every respect.

The only other prospect considered was a young man from Florida. Dr. Dabney interviewed him and wrote us to the effect that he was a fair prospect and, with proper training, would be suitable. Dr. Cofer also interviewed this gentleman.

Because of his experience and ability, and because he has interviewed the Dean of Vanderbilt University and has been promised ample time to perform the editorial duties of the JOURNAL in the event he is elected, this Committee recommends to the Executive Committee and, through them, to the Council the election of Dr. R. H. Kampmeier to succeed Dr. Dabney as Editor of the SOUTHERN MEDICAL JOURNAL.

(Signed) R. L. SANDERS, *Chairman*

October 24, 1953

The Executive Committee approved the Report of the Special Committee and its recommendations for the election of Dr. R. H. Kampmeier to succeed Dr. M. Y. Dabney as Editor. The Executive Committee gave a vote of thanks to the Special Committee for the splendid work it had done.

The Executive Committee of the Council then adjourned.

(Signed) FRED E. WOODSON, *Chairman*

The Report of the Executive Committee meeting in Birmingham on Saturday, February 7, was approved without being read, the members of the Council having received a copy of the Report soon after that meeting.

The Report of the Executive Committee in Atlanta, Saturday morning, October 24, was read and approved including all recommendations.

Dr. M. Y. Dabney, Birmingham, Alabama, Editor of the SOUTHERN MEDICAL JOURNAL, made his annual report.

Following the receiving of the report of the Editor, the Council by a rising vote expressed sincere appreciation to Dr. and Mrs. Dabney for their many years of faithful service to the JOURNAL. The Council pledged themselves to keep the JOURNAL on the high plane Dr. and Mrs. Dabney have set and bespoke their continued cooperation following their retirement next year. Dr. Lee F. Turlington, Birmingham, member of the Council, was requested to convey this expression of appreciation to Dr. and Mrs. Dabney.

Mr. Calvin L. Smith, representing Charles O. Finley and Company, administrators of the Group Disability Insurance Plan, and Mr. Richard Irwin, representing the Continental Casualty Company, underwriters of the plan, were brought before the Council, as suggested in the Executive Committee Report. Various members of the Council asked questions of Mr. Smith and Mr. Irwin. It was moved and carried that the Group Disability Insurance Program be continued with the hope of the underwriter granting another enrollment period, as requested in the Report of the Executive Committee, and with another enrollment period the hope of bringing the participation up to fifty per cent of the membership.

The Research Medal Committee, Dr. R. L. Sanders, Chairman by virtue of being First Vice-President, made the following report, which was approved:

As Chairman of the Committee, I am making the following report:

A letter was addressed to all of the members of this Committee, composed of Dr. William H. Sebrell, Jr., Dr. George E. Burch, Dr. Seale Harris, and Dr. Guy L. Hunner and myself as Chairman. A letter was received from each of these gentlemen and none of them had a suitable candidate in mind for research work during the coming year. Dr. Guy L. Hunner of Baltimore, suggested several

names, but practically all of them are in internal medicine, and no one doing outstanding research work. He did not urge the recommendation of any of them, because he was not sufficiently acquainted with their work. I have looked into the matter, and find that practically none of these men are suitable candidates.

Since we are unable to find anyone in our territory doing unusually outstanding work, we have no recommendation to make at this time. We would, therefore, suggest that we defer to another year and another committee, the selection of a recipient of this award.

(Signed) R. L. SANDERS, *Chairman*

October 20, 1953

The Council received the request from the World Medical Association, Dr. Louis H. Bauer, Secretary-Treasurer, for a continuation of its support. It will be recalled the former President of the World Medical Association, our own Dr. Elmer L. Henderson, first presented the work of the World Medical Association to the Council in 1948. The Council made available that year $500.00 and has done so each year since, the original request being for five years. The Council authorized continued cooperation and approved a contribution of $500.00 for this year.

It was brought to the attention of the Council that the American Medical Education Foundation was still in need of funds. The Association last year appropriated $1,000.00 to the Foundation. At the annual meeting of the American Medical Association in New York in June the Foundation presented the Southern Medical Association with an Award of Merit signed by its president, our own Dr. Elmer L. Henderson, for that contribution last year. The Council appropriated another $1,000.00 to the American Medical Education Foundation.

The Council was advised by the Secretary-Manager that the Safety Deposit Box at the First National Bank containing the Association bonds could be opened only upon there being present together Mr. C. P. Loranz and Dr. M. Y. Dabney. Since the office of Dr. Dabney is not downtown and it is not always convenient for him to be downtown, the Council authorized the Safety Deposit Box to be opened, when both are together, by Mr. C. P. Loranz and Mr. Chris H. King, or any other member of the firm of Neville, Brown and Regan, the auditors for the Association.

A letter was read from the National Society for Medical Research inviting the Southern Medical Association to join. The Council referred this to the Executive Committee with power to act.

It was moved and carried that the salary of Mr. C. P. Loranz, Secretary-Manager, be increased to $1,500.00 per month, retroactive for the preceding year, the fiscal year beginning October 1, 1952, the increase in salary from October 1, 1952, to December 31, 1953, to be paid after January 1, 1954. It was also moved and carried that a gift of $5,000.00 be made to Mr. Loranz in appreciation of his service to the Association, this to be paid over a period of five years or at the discretion of the recipient.

Invitations were presented for the 1955 meeting from the Jefferson County Medical Association, Louisville, Kentucky, the Campbell-Kenton County Medical Association, Newport and Covington, Kentucky, and the Harris County Medical Association, Houston, Texas. All of these invitations were properly considered. It was moved and carried that Houston be selected for the 1955 meeting.

(3) REPORT OF EXECUTIVE COMMITTTEE MEETING

The Chairman of the Executive Committee, Dr. Fred E. Woodson, made the following report of the Executive Committee, which was approved:

The Executive Committee of the Council of the Southern Medical Association met in Atlanta, Georgia, Dinkler-Plaza Hotel, October 27, 1953, at 8:00 a.m. Present: Dr. Fred E. Woodson, Chairman, Tulsa, Oklahoma; Dr. Olin S. Cofer, Vice-Chairman, Atlanta, Georgia; Dr. Milford O. Rouse, Dallas, Texas. Ex-officio members: Dr. Walter C. Jones, President, Miami, Florida; Dr. Alphonse McMahon, President-Elect, St. Louis, Missouri; and Dr. R. L. Sanders, First Vice-President, Memphis, Tennessee.

After conference with Mr. V. O. Foster, Nashville, Tennessee, the Committee recommends to the Council: (1) that he be employed as Executive Secretary and Treasurer at a beginning salary of $12,000 per year; (2) that he begin his duty on August 1, 1954, this period until the expiration of the term of Mr. Loranz on December 1, 1954, being only a period of apprenticeship; and (3) that he be given a contract for five years.

After conference with Mr. Robert F. Butts the Executive Committee recommends the following: (1) that for the ensuing year, beginning November 1, his salary is to be $700.00 per month; and (2) that when the position of Business Manager goes into effect by the approval of the Constitution and By-Laws that he be given the title of Business Manager, an increase in salary and a contract for a five-year period.

The Executive Committee recommends to the Council that the expenses of Mr. Foster, who came to the meeting at its request, be reimbursed to him.

The Executive Committee of the Council then adjourned.

(Signed) FRED E. WOODSON, *Chairman*

The above report of the Executive Committee was approved and the recommendations in that report adopted. Following the adoption of the above report Mr. Foster was presented to the Council and spoke briefly.

REPORT OF THE POLICY COMMITTEE

This Committee after due consideration recommends that the Report on Changes and Revisions in the Constitution and By-Laws remain in the hands of the Policy Committee for one year for active study and completion.

(Signed) LAMAR ARRINGTON, *Chairman*
W. R. PAYNE
HELEN GLADYS KAIN
Committee

Atlanta, Georgia, October 27, 1953

The Report of the Policy Committee was approved which means that the revision of the Constitution and By-Laws, as presented at the Miami meeting in November 1952 and laid on the table for action at this Atlanta meeting will remain on the table and in the hands of the Committee for report at the St. Louis meeting next November. (See SOUTHERN MEDICAL JOURNAL, October 1953, pages 1038-1041, for proposed Revision of Constitution and By-Laws.)

Dr. Milford O. Rouse, Dallas, Texas, recommended to the Policy Committee the following change in the last sentence of Article 6, Section 1, of the Constitution: "An Executive Secretary, a Business Manager, a Treasurer and Editor of the JOURNAL shall be employed by and with the consent of the Council, with salaries and tenure of office to be determined by the Council."

The Council approved the recommendation.

The Council approved the recommendation that Article 2 —Purpose, of the Constitution be changed to read as follows:

"The exclusive purpose of this Association shall be to develop and foster scientific medicine. It shall have no direct connection with or control over any other society or organization, nor shall it at any time be controlled by any other society or organization. All meetings of the Association shall be for the sole purpose of reading and discussing papers pertaining to the science of medicine, to public health and to medical education. The Association shall not at any time take active part in any economic, political or sectarian questions, or concerted movements for securing legislative enactments."

REPORT OF COMMITTTEE ON MEDICAL EDUCATION AND HOSPITALS

Dr. Walter E. Vest, Huntington, West Virginia, Chairman of Committee on Medical Education and Hospitals, made the following report for his Committee, which was approved:

Your Committee has given serious consideration to the problem of medical education in the South and has concluded that there are definite variations in our area from the overall problems of medical education of the entire United States. It is therefore recommended that the Committee be continued.

Your Committee feels that two aspects of medical education in the South deserve special consideration by the incoming committee:

(1) Postgraduate education, or continuing education for the individual physician in active practice, we believe could and should be definitely improved upon in our area. However, this will require much serious planning and hard work.

(2) Negro medical education is peculiarly a southern problem. Your Committee feels that Howard University and Meharry Medical College are doing outstanding work and that these institutions deserve enthusiastic support of the entire profession, and that the regional support by the various southern states should be continued. However, we feel that those southern schools which have opened their doors to properly qualified Negro applicants are to be commended for this step, and that extension of this practice should be developed gradually on an evolutionary basis.

(Signed) WALTER E. VEST, *Chairman*

REPORT OF COMMITTEE ON DOCTOR-HOSPITAL RELATIONSHIP

Dr. Edgar M. Dunstan, Atlanta, Georgia, Acting Chairman of the Committee on Doctor-Hospital Relationship, made the following report for the Committee, which was approved:

The Chairman of the Committee, Dr. J. B. Lukins, was unable to attend the Atlanta meeting of the Southern Medical Association. I was appointed by the President as acting Chairman. The only other committee member present at this meeting was Dr. W. Raymond McKenzie, of Baltimore, Maryland.

Dr. McKenzie and I met and reviewed the previous reports of this committee, particularly the detailed action as suggested in the report of 1947, the principles laid down in 1951, and the recommendations made in 1952.

The problems in this field in 1953 are essentially the same as those that have confronted us since 1947; and the suggested action, the basic principles, and the previous recommendations are re-affirmed. All cases of infraction should continue to be settled at the local level whenever possible. When this is not possible, this committee, if called upon, will exert every effort to find a solution in accordance with the basic principles previously formulated.

Since pathologists, radiologists, and anesthesiologists are at present the specialty groups most affected, we again recommend that, if a future Doctor-Hospital Relationship Committee is appointed, it should include a representative from each of these groups, so that they can be alerted to the seriousness of their position.

(Signed) EDGAR M. DUNSTAN, *Acting Chairman*

Dr. A. Clayton McCarty, member of the Council from Kentucky, offered a resolution on the death of Dr. Elmer Lee Henderson, Louisville, Kentucky, a past President of the Association and Chairman of the Board of Trustees at the time of his death, July 30, 1953.

WHEREAS, God in His infinite wisdom has seen fit to take on to greater rewards and responsibilities our former President, Elmer Lee Henderson, and,

WHEREAS, his loyalty, industry and self-effacing modesty contributed greatly to the advancement of this Association, without ostentation or fanfare, and,

WHEREAS, his deep friendship for many and appreciation of all caused him to bear heavy burdens without complaint or expectation of reward, and, to a degree, hastened his untimely death,

THEREFORE, BE IT RESOLVED: That this Association shall go on record today as recognizing this supreme loss; that this all-too-inadequate tribute be spread upon the Annals of our organization; that copies of these resolutions be sent to his devoted and bereaved family; and that all within hearing shall rise in silent tribute to a noble and courageous immortal. Elmer Lee Henderson has gone on ahead of us. His like will not pass this way again soon.

Dr. Walter E. Vest, representing West Virginia on the Council in the absence of Dr. V. E. Holcombe, offered a resolution on the death of Dr. Robert J. Wilkinson, Huntington, West Virginia, immediate Past President of the Association and member of the Board of Trustees at the time of his death, September 10, 1953.

Inasmuch as Divine Providence has willed to take from our midst and from this life our fellow worker, a former member of this Council, and our immediate Past-President, it is fitting that we pause to pay tribute to his memory.

Robert Johnson Wilkinson was born in Campbell County, Virginia, July 12, 1888, the son of Beverly Jasper and Sarah Jane Traylor Wilkinson. His father was an attorney and a Confederate veteran, having served with Mosby's Rangers in the Ohio raid. His preliminary education was in the public schools and at the Mary Agnes Institute, and his professional education at the Medical College of Virginia, where he graduated in 1912. He interned at the Memorial Hospital, Richmond, and then was associated in general surgery with the late Dr. Claude C. Coleman until October, 1915, when he came to Huntington as surgeon in charge of the Chesapeake and Ohio Hospital.

Dr. Wilkinson was very active in medical organization work. He was a member of the county, state and national associations, the Southern Medical Association, the World Medical Association, the Association of Surgeons of the Chesapeake and Ohio Railway, the Southeastern Surgical Congress, the American Therapeutic Society, and the Alumni Association of the Medical College of Virginia. He was a fellow of the American College of Surgeons and the International College of Surgeons, and was a foundation member of the American Board of Surgery. He was the guiding spirit in the formation of the Medical Review Society of Huntington. He served as president of the Cabell County Medical Society, the Association of Surgeons of the Chesapeake and Ohio Railway, the Alumni Association of the Medical College of Virginia, the West Virginia State Medical Association, the Southern Medical Association, and the Southeastern Surgical Congress, and, at the time of his death, was a director of the World Medical Association.

After his location in Huntington, Dr. Wilkinson's whole life was a part of West Virginia medicine. A pioneer surgeon, a careful student, an earnest advocate of better medicine, better surgery and a better profession, he was ever in the vanguard of medical achievement. Reared among the rugged hills of Piedmont, Virginia, he was steeped in Jeffersonian philosophy, and was a worthy son of the Old South. Bob, as he was affectionately called by his friends, was generous to a fault, a Christian gentleman, a great surgeon, a great human, a great altruist, and truly a great friend of man.

On September 14, 1953, he answered the last roll call, as he had lived, at work.

BE IT RESOLVED by the Council of the Southern Medical Association, that we express our great sorrow at his passing, and our sincere appreciation of his life and worth as a man, of his skill as a surgeon, and of his energy and accomplishments in medical organization; and,

BE IT FURTHER RESOLVED that a copy of this resolution be spread upon our minutes, a copy be sent to the bereaved family, and a copy be published in the SOUTHERN MEDICAL JOURNAL.

Dr. Walter E. Vest, representing West Virginia on the Council in the absence of Dr. V. E. Holcombe, offered a resolution on the death of Dr. Cecil O. Post, Clarksburg, West Virginia, member of the Council at the time of his death, June 11, 1953.

It has pleased the Infinite Creator of the Universe to call from this earthly life our fellow Councilor, Dr. Cecil Omar Post, and we pause to pay tribute to his memory.

Dr. Post was born September 10, 1888, in Harrison County, West Virginia, and resided all his adult life in Clarksburg. He was a graduate of West Virginia University and received his M.D. degree from the College of Physicians and Surgeons, Baltimore, in 1912. He was intensely interested in the affairs of the Harrison County Medical Society, which he joined the year he graduated, and he planned and organized its 75th anniversary celebration last year.

He was athletically inclined and a boys' friend, serving for thirty years as "team doctor" for the football team of Washington Irving High School, always one of the outstanding high school football teams of West Virginia.

Dr. Post had held every office in his county society and served two terms on the Council of the West Virginia State Medical Association. He was a Fellow of the American Academy of General Practice and was a leader in organizing the West Virginia Academy of General Practice. He was appointed to this Council last year.

BE IT RESOLVED by the Council of the Southern Medical Association that we express our deep sorrow at his passing and our great appreciation of his sincerity of life, his professional achievement and the nobility of purpose which ever guided him; and,

BE IT FURTHIER RESOLVED that a copy of this resolution be sent to his bereaved widow, a copy be spread upon our minutes and a copy published in the SOUTHERN MEDICAL JOURNAL.

Resolutions on the death of Dr. Elmer Lee Henderson, Dr. Robert J. Wilkinson and Dr. Cecil O. Post were unanimously adopted by a rising vote, the Council standing with bowed heads in memory of these former officers.

The Council received the Report of the Trustees, incorporating the Report of the Secretary-Manager and the Report of the Auditor. The Council approved the reports and commended the Secretary-Manager on the splendid showing for the year.

REPORT OF TRUSTEES

To the Council of the Southern Medical Association:

The Trustees of the Southern Medical Association met at the Dinkler-Plaza Hotel, Ansley Room, Atlanta, Georgia, Monday, October 26, 9:00 p.m. Present: Dr. Hamilton W. McKay, Acting Chairman by appointment of the President, Charlotte, North Carolina; Dr. Lucien A. LeDoux, New Orleans, Louisiana; Dr. James A. Ryan, Covington, Kentucky; and Dr. Curtice Rosser, Dallas, Texas.

The meeting was called to order by the Chairman. The

Report of the Secretary-Manager, Mr. C. P. Loranz, incorporating the report of the Auditor, was reviewed and approved. It was requested that a written Report of the Secretary-Manager be submitted to each Trustee prior to the annual meeting, and that a date, hour and place be designated for the meeting prior to the meeting.

There being no further business, the Trustees adjourned.

(Signed) HAMILTON W. MCKAY, *Acting Chairman*

REPORT OF AUDITOR

To the Southern Medical Association:

We have examined the balance sheet of the Southern Medical Association as of September 30, 1953, and the related statements of income and retained earnings for the year then ended. In connection therewith, we have reviewed the accounting procedures and, without making a detailed audit of all transactions, have examined or tested accounting records of the Association and other supporting evidence by methods and to the extent we considered appropriate. We made a similar examination for the fiscal year ended September 30, 1952.

Revenue from dues, subscriptions and technical exhibits was taken into account on the cash receipts basis. Revenue from JOURNAL advertising and sale of reprints was recorded on the accrual basis. Amounts due the printer for publishing the JOURNAL have been accrued during the year. All other expenses, except depreciation, represent cash disbursements.

In our opinion, based upon our examination, the accompanying balance sheet and related statements of income and retained earnings, together with supporting exhibits present fairly the financial position of Southern Medical Association at September 30, 1953, and the results of its operations for the year then ended, in conformity with generally accepted accounting principles, applied on a basis consistent with that of the preceding year.

(Signed) NEVILLE, BROWN & REGAN,
Certified Public Accountants,
BY CHRIS H. KING, C. P. A.

Birmingham, Alabama, October 16, 1953.

REPORT OF SECRETARY-MANAGER*

To the Southern Medical Association:

A detailed financial statement for twelve months, the fiscal year ending September 30, is here given and is self-explanatory. The books for the fiscal year have been audited by the auditing firm selected by the Council, Neville, Brown and Regan, and we are transmitting a copy of their report.

It will be noted that the amount of U. S. Government Bonds, purchase value, owned by the Association, as shown

*See pages 419 and 420 for two statements by C. P. Loranz, "Forty Years of Service" and "Forty-One Years of Service."

MEMBERS BY STATES

The following is a comparative statement of membership of the Southern Medical Association for the past seven years:

	1947	1948	1949	1950	1951	1952	1953
Alabama	492	521	524	550	555	602	736
Arkansas	230	230	217	212	219	216	234
District of Columbia	198	223	224	200	188	181	210
Florida	567	757	822	807	741	798	1009
Georgia	495	546	596	557	517	601	814
Kentucky	512	510	520	554	491	466	524
Louisiana	322	441	435	419	425	449	504
Maryland	511	572	552	486	420	406	472
Mississippi	272	272	270	298	271	250	312
Missouri	649	620	601	597	582	554	580
North Carolina	562	496	519	500	453	460	643
Oklahoma	320	319	307	290	279	287	281
South Carolina	244	260	251	258	249	252	323
Tennessee	495	509	503	503	473	518	565
Texas	739	745	750	742	1075	1144	1141
Virginia	459	474	481	472	442	425	563
West Virginia	254	269	262	260	250	273	332
Other States and Foreign	126	129	120	126	123	212	105
Totals	7447	7893	7954	7831	7733	8094	9348

BALANCE SHEET

Balance Sheet, Southern Medical Association, Fiscal Year Ending September 30, 1953 (October 1, 1952, to September 30, 1953)

	Debits	*Credits*
Surplus		$183,188.73
U. S. Government Bonds	$140,180.00	
Air Lines Travel Fund	425.00	
Furniture and Fixtures	11,024.83	
Depreciation	1,467.34	
Revenue		
Advertising		93,397.09
Dues		85,014.85
Subscriptions		5,373.43
Reprints		811.82
Exhibits		25,390.00
Expense		
Publishing	62,739.23	
Cuts and Electros	3,773.08	
Second Class Postage	1,875.00	
Office Postage	5,606.69	
Salary	55,871.14	
Stationery and Printing	5,493.43	
Office Supplies and Expense	1,892.43	
Telephone and Telegraph	826.90	
Office Rent	5,091.00	
Interest and Discount	1,675.03	
Advertising Expense	334.62	
Addressograph Expense	243.35	
Traveling Expense	4,051.14	
Expense at Atlanta	502.47	
Expense at Dallas	16.89	
Expense at Miami	24,749.66	
Banking Expense	7.04	
Section Officers Expense	660.09	
Woman's Auxiliary	1,012.00	
General Expense	2,796.87	
Income Tax		253.60
Contributions	625.00	
Express	253.31	
Executive Committee Meeting Expense	677.75	
Lights and Power	450.27	
Employees Hospital Insurance	295.40	
Insurance	620.29	
Audit Fee	450.00	
Accounts Receivable (owe us)	3,574.10	
Accounts Payable (we owe)		63.80
Cash	54,231.97	
	$393,493.32	$393,493.32

SUMMARY OF EARNINGS

Revenue Accounts	$209,987.19
Expense Accounts	182,590.08
Gross Profit for year ending September 30, 1953	$ 27,397.11
Less Depreciation	1,467.34
Net Profit for year ending September 30, 1953	$ 25,929.77

SURPLUS ACCOUNT

Surplus for year ending September 30, 1952	$183,188.73
Net Profit for year ending September 30, 1953	25,929.77
	$209,118.50

STATEMENT OF ASSETS AND LIABILITIES

Assets

U. S. Government Bonds at cost	$140,180.00
Air Lines Travel Fund	425.00
Furniture and Fixtures	11,024.83
Accounts Receivable	3,574.10
Cash	54,231.97
	$209,435.90

Liabilities

Accounts Payable	$ 63.80
Income Tax	253.60
Surplus	209,118.50
	$209,435.90

in the report at the close of the last fiscal year was $140,180.00.

Last year we reported 8,094 members and during the year we have received 2,052 new members. The loss from resignations, deaths and suspensions was 798, leaving a net membership at this time of 9,348, or a net gain for the year of 1,254.

Last year at the Miami meeting the Association decided to offer a Group Insurance Program to its members. It will be recalled that the Association selected the Continental Casualty Company to underwrite the program and Charles O. Finley and Company to administer it. The Administrator was to have complete charge of the insurance program.

Since the Association benefited in no way financially from the program, the total cost of administering the program was to be met by the Administrator. The insurance as offered was to become effective to all members regardless of medical history when and if fifty per cent of the membership applied. We reported a total membership of 8,094 at the Miami meeting. Fifty per cent of that would be 4,047. In response to the first promotion campaign by the Administrator there came to our office 2,159 applications, which were promptly forwarded to the Administrator. This was 27 per cent of the total membership reported at Miami.

The Executive Committee gave the Administrator permission to canvass non-members of the Association eligible for Association membership to become members and participate in the insurance program. In response to that promotion campaign by the Administrator there have been received at this office 1,391 applications, of which 152 had previously applied, a net of 1,239, making the total number of applications received as of this date 3,398, or 36 per cent of 9,348, the total membership as of this date.

The underwriters have taken many of those that applied, have put riders on many others and turned down many. We have received a great number of letters of dissatisfaction.

As your Secretary, Treasurer and General Manager, carrying the title of Secretary-Manager, I have endeavored this year, as I have in past years, to conduct your affairs in a satisfactory manner, and have tried at all times to be faithful and efficient. I have tried to be as economical as possible and carry on the Association activities at the lowest cost without curtailing any more than possible the size of the JOURNAL or any other Association activities that we have.

I wish to express my appreciation for the fine cooperation of the President, Dr. Walter C. Jones, and of all other officers, general and of the sections, and of the officers and committees of the host society, the Fulton County Medical Society, as well as those who work with me at headquarters.

(Signed) C. P. LORANZ, *Secretary-Manager*

Birmingham, Alabama, October 20, 1953

A member of the Council at the request of Dr. M. Y. Dabney, Editor, moved that the services of Dr. Howard L. Holley as an Associate Editor at $100.00 per month be continued until the end of Dr. Dabney's tenure of office. Motion carried.

Dr. Lowry H. McDaniel, Councilor from Arkansas, invited the Council to attend the meeting of the First Councilor District of Arkansas at Tyronza on Thursday, May 20.

The Council, speaking for the Association, expresses to the Fulton County Medical Society, the Medical Association of Georgia, the hotels of Atlanta, the press and to all others who have contributed so much to the success of the meeting in this city, their sincere appreciation for the hospitality extended while guests here. It is the opinion of the Council that this, the Atlanta meeting, has been one of the best in the history of the Association. Those who are in attendance have enjoyed the sincere hospitality of the profession and feel that a great measure of credit for the success of the meeting is due to the interest manifested by the local profession and by the citizens of Atlanta.

Dr. Helen Gladys Kain, Washington, D. C., reported that several women physicians had complained about not being included fully in the Group Disability Insurance Program. It was moved and carried that the Executive Committee would look into this problem.

The Council selected November 12-15 for the 1956 meeting in Washington, D. C., and gave its approval for this to be a joint meeting of the District of Columbia Medical Association and the Southern Medical Association, using the Armory for meetings and exhibits.

The Council elected Dr. Walter C. Jones, Miami, Florida, the outgoing President, as a member of the Board of Trustees for a term of six years to succeed Dr. E. L. Henderson.

The Council elected Dr. Walter E. Vest, Huntington, West Virginia, to the Board of Trustees to fulfill the unexpired term of Dr. R. J. Wilkinson, who died during the past year.

The Council elected Dr. J. Morris Reese, Baltimore, Maryland, as a member of the Executive Committee to succeed Dr. Fred E. Woodson, whose term expires with the close of this meeting.

The Council elected Dr. Olin S. Cofer, Atlanta, Georgia, formerly Vice-Chairman of the Council, as Chairman for the next year, and Dr. Milford O. Rouse, Dallas, Texas, as Vice-Chairman.

The Council then adjourned as a Council and reassembled as a Nominating Committee.

(Signed) FRED E. WOODSON, *Chairman*

REPORT OF NOMINATING COMMITTEE*

The Council, as the Nominating Committee, presents for the consideration of the Association the following nominations:

For President-Elect: Dr. R. L. Sanders, Memphis, Tennessee.

For First Vice-President: Dr. W. Raymond McKenzie, Baltimore, Maryland.

For Second Vice-President: Dr. Marion C. Pruitt, Atlanta, Georgia.

(No nomination for Editor, Dr. M. Y. Dabney, and Assistant Editor, Mrs. Eugenia B. Dabney, or Secretary-Manager, Mr. C. P. Loranz. Dr. and Mrs. Dabney were elected four years ago for a term of five years and Mr. Loranz was elected one year ago for a term of two years.)

(Signed) FRED E. WOODSON, *Chairman*

WOMEN PHYSICIANS

The thirty-ninth annual meeting and dinner for Women Physicians of the Southern Medical Association was held at Atlanta, Monday, October 26, 7:00 p.m. at the Piedmont Driving Club. Dr. Eva F. Dodge, Little Rock, Arkansas, Chairman of the Women Physicians, presided. Forty-nine women physicians were present.

Mrs. Medora Field Perkerson, author of "White Columns of Georgia," spoke on "Ghosts and Glamor of the Old South."

The visiting women physicians were guests of the Medical Women of Atlanta at a buffet luncheon at the Young Women's Christian Association on Tuesday, October 27.

Dr. Elisabeth Martin, Atlanta, Georgia, was elected Chairman; and Dr. Rose H. McClanahan, Charleston, West Virginia, Vice-Chairman.

Dr. Amey Chappell, Atlanta, was Chairman of the Committee for Women Physicians, and associated with her were Dr. W. Elizabeth Gambrell, Dr. Helen W. Bellhouse, Dr. Estelle P. Boynton, Dr. Betty Ann Brooks, Dr. Lelia D. Denmark, Dr. Cordelia K. Dowman, Dr. Maude E. Foster, Dr. Regina Gabler, Dr. Harriet E. Gillette, Dr. L. Margaret Green, Dr. Eugenia C. Jones, Dr. Ellen Finley Kiser, Dr. Rose A. Lahman, Dr. Elisabeth Martin, Dr. Estelle McNiece, Dr. Lila Bonner Miller, Dr. Eclyda R. McClure, Dr. Edna Smith Porth, Dr. Margaret J. Wall, and Dr. Kathleen Wickman, all of Atlanta.

SCIENTIFIC AWARDS

Your Committee on Scientific Awards visited the scientific exhibits and, after studying the exhibits, makes the following report:

First award to George T. Harrell, Bowman Gray School of Medicine, Winston-Salem, North Carolina, for his exhibit on "Cellular Changes of Sodium and Potassium in Man."

Second award to Bela Halpert, William S. Fields and Michael E. DeBakey, Veterans Administration Hospital and Baylor University College of Medicine, Houston, Texas, for their exhibit on "Intracranial Metastasis from Carcinoma of the Lung."

---

*At a General Session held at the Atlanta Biltmore Hotel, Atlanta, Georgia, Wednesday, October 28, at 8:00 p.m., the Report of the Nominating Committee was accepted and the nominees elected by acclamation. See page 391 this issue.

Third award to Lewis H. Bosher, Jr., Medical College of Virginia, Richmond, Virginia, for his exhibit on "Technics in Cardiovascular Surgery."

Honorable mention to:

Joe M. Blumberg, Walter Reed Army Medical Center, Washington, D. C., and H. E. Nieburgs, Medical College of Georgia, Augusta, Georgia, for their exhibit on "Detection and Diagnosis of Asymptomatic Uterine Cancer by Exfoliative Cytology."

Charles W. Hock, Medical College of Georgia, Augusta, Georgia, for his exhibit on "Bleeding from the Gastrointestinal Tract."

Karl John Karnaky, Jefferson Davis Hospital and Baylor University College of Medicine, Houston, Texas, for his exhibit on "New and Improved Treatment for Vaginal Infections."

Ruth Rumsey, Veterans Administration Hospital, New York, New York, for her exhibit on "Physical Medicine and Rehabilitation: Occupational, Manual Arts and Educational Therapy."

George D. Vaughan, Medical College of Virginia Hospital, Richmond, Virginia, and Harry E. Bacon, Temple University Hospital, Philadelphia, Pennsylvania, for their exhibit on "Surgical Treatment of Ulcerative Colitis."

(*Signed*) LOWRY H. MCDANIEL, *Chairman*
H. R. PRATT-THOMAS
ROBERT E. STONE
JOHN V. GOODE
JOHN C. PERRY
Committee

The Committee on Scientific Awards consists of five members of the Association, appointed by the Chairman of the Council, one to represent pathology, one medicine, one surgery and two at large, one member to be a member of the Council who shall be chairman of the Committee.

GOLF TOURNAMENT

Dr. J. R. Childs, Chairman of Golf Committee, Atlanta, Georgia, makes the following report for his Committee:

The thirtieth annual golf tournament for physicians of the Southern Medical Association was held on Monday, Tuesday and Wednesday, October 26, 27 and 28, at the Druid Hills Golf Club, 740 Clifton Road, Northeast, Atlanta. Eighty participated in the tournament.

Dr. Owen B. Evans, Decatur, Alabama, won the *Daily Oklahoman* and *Times Cup*, for low gross, junior class, with a score of 78.

Dr. J. Harry Rogers, Atlanta, Georgia, won the *Miami Daily News Shield* for low gross, senior class, with a score of 79.

Dr. David A. Davis, Jr., Chapel Hill, North Carolina, won the *Dallas Morning News* Cup, handicap for low net, with a score of 67.

The *Daily Oklahoman* and *Times Cup*, the *Miami Daily News Shield* and the *Dallas Morning News* Cup must be won three times by the same golfer to become the permanent possession of a contestant. Since no one has won these trophies three times, they will be in play next year.

(*Signed*) J. R. CHILDS, *Chairman*.

SCIENTIFIC EXHIBITS

Municipal Auditorium

Exhibits were open Monday, Tuesday and Wednesday, October 26, 27 and 28 from 8:00 a.m. to 6:00 p.m. and on Thursday, October 29, from 8:00 a.m. to 1:00 p.m.

Medicine

1. RAYMOND F. GRENFELL, Jackson, Miss.: Treatment of Essential Hypertension with the Hydrogenated Alkaloids of Ergot.

2. FRANK W. PICKELL, Baton Rouge, La.: A Weighed Prognostic Index for Idiopathic Hypertension.

3. KERRISON JUNIPER, JR., Veterans Administration Hospital, Atlanta, Ga.: Bile Microscopy in Cholecystitis and Cholelithiasis.

4. GEORGE F. SCHMITT, Veterans Administration Hospital, Coral Gables, Fla.: What Is Your Heart I. Q.?

5. THOMAS C. FLEMING, Hoffmann-LaRoche Research Laboratories, Nutley, N. J.: The Effect of Two New Drugs on Circulation.

Allergy

6. HENRY D. OGDEN, Louisiana State University School of Medicine, New Orleans, La.: Respiratory Symptoms and Tobacco.

7. MARION T. DAVIDSON, Medical College of Alabama, Birmingham, Ala.: Cancer and the Arthus Phenomenon.

Surgery

8. DAVID WOOLFOLK BARROW and LOUIS HAMMAN, JR., Lexington, Ky.: Trends in Treatment of Varicose Veins, Stasis Ulcer and the Post-Thrombophlebitic Syndrome.

9. JOHN W. DEVINE, and JOHN W. DEVINE, JR., Lynchburg, Va.: Duodenal Intubation in Intestinal Obstruction.

Urology

10. EARL FLOYD, JAMES L. PITTMAN and J. CANDLER GUY, Emory University School of Medicine, Atlanta, Ga.: The Evaluation of Diagnostic Procedure in Renal Masses.

Gynecology

11. KARL JOHN KARNAKY, Jefferson Davis Hospital and Baylor University College of Medicine, Houston, Tex.: New and Improved Treatment for Vaginal Infections.

12. PAUL F. CRAIG, Craig Clinic, Tulsa, Okla.: Premenstrual Tension and the Menopause.

Medicine

13. HOWARD A. CARTER and THOMAS G. HULL, American Medical Association, Chicago, Ill.: Artificial Respiration.

Neurology

14. FREDERIC T. ZIMMERMAN and BESSIE B. BURGEMEISTER, The Neurological Institute, Columbia-Presbyterian Medical Center, New York, N. Y.: New Drugs in the Treatment of Petit Mal Epilepsy.

15. RICHARD L. JENKINS, JAMES Q. HOLSOPPLE and MAURICE LORR, Veterans Administration, Washington, D. C.: Prefrontal Lobotomy in Chronic Schizophrenia.

Pediatrics

16. SAMUEL EICHOLD, II, Mobile, Ala., and LEON S. SMELO, Birmingham, Ala.: Camp Seale Harris at Mobile for Children with Diabetes.

Medicine

17. ARTHUR J. MERRILL, JOSEPH WILSON, MILTON KRAININ and OSCAR FREEMAN, Emory University School of Medicine, Atlanta, Ga.: The Artificial Kidney.

18. BELA HALPERT, WILLIAM S. FIELDS and MICHAEL E. DeBAKEY, Veterans Administration Hospital and Baylor University College of Medicine, Houston, Tex.: Intracranial Metastasis from Carcinoma of the Lung.

19. MALCOLM J. FORD, Division of Chronic Disease and Tuberculosis, U. S. Public Health Service, Washington, D. C.: Rheumatic Fever is a Recurrent Disease Which Can Be Prevented.

Otolaryngology

20. MURDOCK EQUEN, GEORGE ROACH, ROBERT BROWN, HARRY MORSE and TRUETT BENNETT, Ponce de Leon Eye and Ear Infirmary, Atlanta, Ga.: You Will Talk Again—Demonstration of Esophageal Voice by Laryngectomized Patients.

Ophthalmology

21. MORGAN B. RAIFORD, Ponce de Leon Eye and Ear Infirmary, Atlanta, Ga.: Ophthalmic Perimetry.

22. GREGORY FLYNN, Ponce de Leon Eye and Ear Infirmary, Atlanta, Ga.: Cataract Extraction: An Improved Technic.

Obstetrics

23. OSCAR B. HUNTER, JR., and RICHARD H. FISCHER, Doctors Hospital Research Foundation, Washington, D. C.: Control of Cortisone Therapy in Rh Incompatibilities.

Surgery

24. ROBERT P. GLOVER, THOMAS J. E. O'NEILL, O. HENRY JANTON and LOUIS A. SOLOFF, Hahnemann Medical College and Hospital, Philadelphia, Pa.: Stenotic Valvular Heart Disease: Results of Surgery.

Medicine

25. L. E. JOSSELYN, Abbott Laboratories, North Chicago, Ill.: Erythromycin.

Urology

26. JOSEPH W. HOOPER, JR., Wilmington, N. C., and J. E. HILL and A. I. DODSON, JR., Richmond, Va., Medical College of Virginia, Richmond, Va.: The Technic of Pre-Sacral Air Study with Illustrative Cases.

Endocrinology

27. WILLIAM E. BARFIELD, NELSON H. BROWN and ROBERT B. GREENBLATT, Medical College of Georgia, Augusta, Ga.: The Storage of Estrogen in Human Fat.

Medicine

28. GEORGE T. HARRELL, Bowman Gray School of Medicine, Winston-Salem, N. C.: Cellular Changes of Sodium and Potassium in Man.

Urology

29. J. C. KIMBROUGH, F. E. COOK and A. A. BORSKI, Walter Reed Army Hospital, Urology Service, Washington, D. C.: Testicular Tumors.

Proctology

30. GEORGE D. VAUGHAN, Medical College of Virginia Hospital, Richmond, Va., and HARRY E. BACON, Temple University Hospital, Philadelphia, Pa.: Surgical Treatment of Ulcerative Colitis.

Dermatology

31. HARRY M. ROBINSON, JR., ALBERT SHAPIRO, ISRAEL ZELIGMAN and M. M. COHEN, University of Maryland School of Medicine, Baltimore, Md.: Terramycin® in the Treatment of Dermatoses.

Physical Medicine and Rehabilitation

32. RUTH RUMSEY, Veterans Administration Hospital, New York, N. Y.: Physical Medicine and Rehabilitation: Occupational, Manual Arts and Educational Therapy.

Medicine

33. N. REEVES, C. L. LEEDHAM and V. P. SYDENSTRICKER, Medical College of Georgia, Augusta, Ga.: Viral Hepatitis.

34. JAMES RUEGSEGGER, B. W. CAREY and S. M. HARDY, Lederle Laboratories Division, American Cyanamid Company, Pearl River, N. Y.: The Physiological and Therapeutic Effects Produced by Inhibition of the Enzyme, Carbonic Anhydrase.

Gastroenterology

35. CHARLES W. HOCK, Medical College of Georgia, Augusta, Ga.: Bleeding from the Gastrointestinal Tract.

Ophthalmology

36. LOUIS DAILY, JR., and RAY K. DAILY, Memorial Hospital, Houston, Tex.: Corneal Transplantation.

Cytology

37. H. E. NIEBURGS, Medical College of Georgia, Augusta, Ga., in cooperation with all members of the Floyd County Medical Society, and T. G. PEACOCK, State Hospital, Milledgeville, Ga.: The Diagnosis of Early Cervical Carcinoma by the Controlled Screening of an Entire Female Population Group.

38. J. ERNEST AYRE, The Cancer Institute at Miami, Miami, Fla.: A New Rapid Method of Gastric Cancer Diagnosis Using Stomach Brush.

Neurology

39. WILLIAM R. CHAMBERS, EXUM WALKER, WILLIAM W. MOORE, JAMES R. SIMPSON, F. VATNAR KRISTOFF, FRANKLIN C. MILES, ROBERT A. SEARS and THOMAS B. SUMMERS, The Neuroclinic, Atlanta, Ga.: Strokes: Some Can Be Cured.

Pubic Health

40. WARFIELD GARSON and CARL E. HOOKINGS, Memphis and Shelby County Health Department, Memphis, Tenn.: Speed-Zone Epidemiology for Gonorrhea Control.

Anatomy

41. STEPHEN W. GRAY, J. MORRIS PERKINS, GEORGE L. WALLACE, JR., THOMAS WHITESIDES, JR., and MORGAN WYNNE, JR., Emory University, Division of Basic Sciences, Emory University, Ga.: Anatomy of the Anencephalic Fetus.

Public Health

42. JOHN M. WHITNEY, Federal Civil Defense Administration, Atlanta, Ga.: Civil Defense Health and Medical Services.

Medicine

43. M. L. TAINTER, JOHN C. SEED, A. M. LANDS and JOHN W. HART, Sterling Winthrop Research Institute, Rensselaer, N. Y.: Levophed® in Myocardial Infarction.

44. R. J. MEYER, E. A. FULLGABE and R. L. BROWN, The Armour Laboratories, Chicago, Ill.: Action and Clinical Uses of ACTH.

REGISTRATION

Atlanta Meeting, Southern Medical Association
October 26-29, 1953

	Number Physicians	Number Ladies Accompanying Physicians
Alabama	196	106
Arkansas	37	19
District of Columbia	35	14
Florida	194	103
Georgia (Outside Fulton County)	376	127
Atlanta	566	- -
Kentucky	62	36
Louisiana	80	44
Maryland	33	19
Mississippi	55	36
Missouri	57	35
North Carolina	107	43
Oklahoma	27	18
South Carolina	87	43
Tennessee	139	60
Texas	110	52
Virginia	68	30
West Virginia	25	10
Other States	82	15
Foreign	12	1
Total Physicians	2,347	811
Medical Students	266	
Technicians	100	
Nurses	95	
Technical Exhibits	325	
Miscellaneous	89	
	3,222	
Ladies	811	
Grand Total	4,033	

These figures are compiled from the card registration. There are always a number of physicians attending who neglect to register, especially where no attendance fee is charged as was the case at Atlanta. Under such circumstances the number attending who fail to register is variously estimated from 3 to 10 per cent of the total registration. It is believed that at least 5 per cent of the physicians who attended the Atlanta meeting failed to register, and if this is true, an additional 117 physicians should be added to the 2,347 who did register, making the actual attendance at least 2,464 physicians, with a grand total of 4,150.

Surgery

45. JACOB J. WEINSTEIN, JOSEPH H. ROE and WILLIAM LIU, George Washington University School of Medicine and Gallinger Municipal Hospital, Washington, D. C.: Clinical Use of Dextran.

Medicine

46. WILLIAM M. GOVIER, The Upjohn Company, Kalamazoo, Mich.: Shock is Metabolic Failure.

47. JAMES J. GRIFFITTS, The Medical Research Foundation of Dade County, Miami, Fla.: The Management of Nephrosis.

Cytology

48. JOE M. BLUMBERG, Walter Reed Army Medical Center, Washington, D. C., and H. E. NIEBURGS, Medical College of Georgia, Augusta, Ga., Detection and Diagnosis of Asymptomatic Uterine Cancer by Exfoliative Cytology.

Otolaryngology

49. J. BROWN FARRIOR, Southern Foundation of Better Hearing, Tampa, Fla.: The Fenestration Operation: Experience in 450 Cases.

Surgery

50. LEWIS H. BOSHER, JR., Medical College of Virginia, Richmond, Va.: Technics in Cardiovascular Surgery.

51. DAVID HENRY POER, Emory University and Piedmont Hospitals, Atlanta, Ga.: Georgia Goiters.

Ophthalmology

52. NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS, New York, N. Y.: Progress and Problems in Prevention of Blindness.

Physical Medicine and Rehabilitation

53. AMERICAN PHYSICAL THERAPY ASSOCIATION, Georgia Chapter: Physical Therapy.

Pediatrics

54. CHARLES O'REGAN and SIGMUND SCHWARZER, St. Clare's Hospital, and T. A. GARRETT, Pfizer Laboratories, New York, N. Y.: Intramuscular Terramycin® Laboratory and Clinical Studies in Children.

Allergy

55. OREN C. DURHAM, Abbott Laboratories, North Chicago, Ill.: Air-Borne Allergens of the South.

Radiology

56. LESTER M. PETRIE, Georgia Department of Public Health, Atlanta, Ga.: You Can Be Safe from X-Rays.

Otolaryngology

57. ROBERT E. RYAN, St. Louis, Mo.: Headache: Anatomical Structures Involved and the Symptoms and Treatment of Various Forms of Headache.

General

58. THE SOUTHERN MEDICAL ASSOCIATION GROUP DISABILITY INSURANCE PROGRAM.

Neurology

59. ROBERT DEAN WOOLSEY, St. Louis, Mo.: The Mechanism of the Neurological Symptoms and Signs in Spondylolisthesis.

Pathology

60. JOHN L. THORNTON and GORDON R. HENNIGAR, Medical College of Virginia, Richmond, Va.: Tumors of the Salivary Glands.

Pediatrics

61. JOSEPH M. LoPRESTI, Children's Hospital and George Washington University School of Medicine, Washington, D. C.: (1) The Caffey-Smith Syndrome, and (2) The Reticuloendothelioses.

Radiology

62. I. R. BERGER and MAX MICHAEL, JR., Veterans Administration Hospital and Emory University School of Medicine, Atlanta, Ga.: The Roentgen Appearance of the Chest in Cortisone-Treated Sarcoidosis.

Pathology

63 R. H. RIGDON and A. P. FREUND, University of Texas Medical Branch, Galveston, Tex.: A Radio-Transparent Postmortem Table.

Surgery

Between 28 and 29. J. ELLIOTT SCARBOROUGH, ROBERT L. BROWN and SAM A. WILKINS, JR., Emory University School of Medicine, Emory University, Ga.: Melanoma.

TECHNICAL EXHIBITS

Municipal Auditorium

Here follow the names of the firms who had exhibits and their space number:

	Space No.
Abbott Laboratories, North Chicago, Illinois	49
A. S. Aloe Company, Atlanta, Georgia and St. Louis, Missouri	22
American Sterilizer Company, Erie, Pennsylvania	72
American Hospital Supply Corporation, Chamblee, Georgia and Evanston, Illinois	6
Ames Company, Inc., Elkhart, Indiana	70
Armour Laboratories, Chicago, Illinois	87
Arnar-Stone Laboratories, Inc., Evanston, Illinois	84
B. F. Ascher & Company, Inc., Kansas City, Missouri	76
Baker Laboratories, Inc., Cleveland, Ohio	34
Bard-Parker, Inc., Danbury, Connecticut	8
BeechNut Packing Company, New York, New York	17
Bilhuber-Knoll Corporation, Orange, New Jersey	23
The Borden Company, New York, New York	81
Chicago Pharmacal Company, Chicago, Illinois	15
The Central Pharmacal Company, Seymour, Indiana	4
Ciba Pharmaceutical Products, Inc., Summit, New Jersey	40
The Columbus Pharmacal Company, Columbus, Ohio	82
Commercial Solvents Corporation, New York, New York	56
Dade Reagents, Inc., Miami, Florida	16
Davis & Geck, Inc., Brooklyn, New York	83
The Doho Chemical Corporation, New York, New York	24-25
Eastman Kodak Company, Rochester, New York	42
Eaton Laboratories, Inc., Norwich, New York	61
C. B. Fleet Company, Inc., Lynchburg, Virginia	57
Fellows Medical Mfg. Co., Inc., New York, New York	69
Florida Brace Corporation, Winter Park, Florida	62
E. Fougera and Company, Inc., New York, New York	32
Geigy Pharmaceuticals, New York, New York	27
Grune & Stratton, Inc., New York, New York	74
The Harrower Laboratory, Inc., Jersey City, New Jersey	63
Charles C. Haskell & Company, Inc., Richmond, Virginia	31
Hoffmann-LaRoche, Inc., Nutley, New Jersey	38
Ives-Cameron Company, Inc., New York, New York	28
Kremers-Urban Company, Milwaukee, Wisconsin	78
Lakeside Laboratories, Inc., Milwaukee, Wisconsin	19
Lea & Febiger, Philadelphia, Pennsylvania	64
Lederle Laboratories, New York, New York	21
Eli Lilly and Company, Indianapolis, Indiana	65-66
R. J. Lindquist Company, Los Angeles, California	85
J. B. Lippincott Company, Philadelphia, Pennsylvania	67
M & R Laboratories, Columbus, Ohio	73
J. A. Majors Company, Atlanta, Georgia, New Orleans, Louisiana and Dallas, Texas	43
The S. E. Massengill Company, Bristol, Tennessee	36
F. Mattern Mfg. Company, Chicago, Illinois	68
McNeil Laboratories, Inc., Philadelphia, Pennsylvania	86
Mead Johnson and Company, Evansville, Indiana	37
Medco Products Company, Tulsa, Oklahoma	71
Merck & Company, Inc., Rahway, New Jersey	48
The Wm. S. Merrell Company, Cincinnati, Ohio	39
The C. V. Mosby Company, St. Louis, Missouri	20
Nepera Chemical Company, Yonkers, New York	75
Parke, Davis & Company, Detroit, Michigan	1-2-3
Pet Milk Company, St. Louis, Missouri	7
Chas. Pfizer & Company, Inc., Brooklyn, New York	79

Pitman-Moore Company, Indianapolis, Indiana 60
William P. Poythress and Company, Inc., Richmond, Virginia 59
Ritter Company, Inc., Rochester, New York 10
A. H. Robins Company, Inc., Richmond, Virginia 41
J. B. Roerig and Company, Chicago, Illinois 11
Rystan Company, Inc., Mount Vernon, New York 18
Sanborn Company, Cambridge, Massachusetts 52
Sandoz Chemical Works, Inc., New York, New York 88
W. B. Saunders Company, Philadelphia, Pennsylvania 44
Schenley Laboratories, Inc., Lawrenceburg, Indiana 26
G. D. Searle & Company, Chicago, Illinois 50
Sharp & Dohme, Inc., Philadelphia, Pennsylvania 45-46-47
Smith, Kline & French Laboratories, Philadelphia, Pennsylvania 33
The Stuart Company, Chicago, Illinois 53
E. R. Squibb & Sons, New York, New York 29-30
Swift & Company, Chicago, Illinois 14
Tablerock Laboratories, Greenville, South Carolina 35
Frederick Trout Company, Inc., Atlanta, Georgia 80
U. S. Vitamin Corporation, New York, New York 5
The Upjohn Company, Kalamazoo, Michigan 51
VanPelt & Brown, Inc., Richmond, Virginia 77
Wallace & Tiernan Products, Inc., Belleville, New Jersey 58
Westwood Pharmaceuticals, Buffalo, New York 54
White Laboratories, Inc., Kenilworth, New Jersey 9
Withrop-Stearns, Inc., New York, New York 12-13
Wyeth Laboratories, Philadelphia, Pennsylvania 55

MOTION PICTURES

Municipal Auditorium

Tuesday and Wednesday, October 27 and 28, 9:00 a.m. to 5:30 p.m.

9:00 a.m. to 12:00 noon—Program.

12:00 noon to 2:00 p.m.—Request period.

2:00 to 5:17 p.m.—Program.

5:17 to 5:30 p.m.—Request period.

Request period—Any film on the program may be run at this time upon request to the movie operator, or any film approved by the management, provided it does not interfere with the regular program.

Program—The motion picture films will run in the order indicated below. The time the film is scheduled to begin is indicated after each title, followed by the number of minutes necessary for each film to run.

Tuesday and Wednesday, 9:00 a.m.

1. "Improved Methods of Exposure for Thyroidectomy" (9:00 a.m., 30 minutes), DAVID HENRY POER, Emory University and Piedmont Hospitals, Atlanta, Ga.

2. "A New Tube in the Treatment of Intestinal Obstruction" (9:30 a.m., 15 minutes), JOHN W. DEVINE, JR., Lynchburg, Va.

3. "Cataract Extraction: An Improved Technic" (9:45 a.m., 25 minutes), GREGORY FLYNN, Ponce de Leon Eye and Ear Infirmary, Atlanta, Ga.

4. "Decompression of the Gasserian Ganglion and Posterior Root for Trigeminal Neuralgia" (10:10 a.m., 25 minutes), ROBERT DEAN WOOLSEY, St. Louis, Mo.

5. "Vaginal Hysterectomy" (10:35 a.m., 25 minutes), JOSEPH W. KELSO, University of Oklahoma School of Medicine, Oklahoma City, Okla.

6. "Excessive Doses of an Estrogen in the Treatment of Advanced Incurable Carcinoma of the Cervix" (11:00 a.m., 20 minutes), H. E. NIEBURGS, Medical College of Georgia, Augusta, Ga.

7. "Detection of Cancer by Cervical and Uterine Smears" (11:20 a.m., 18 minutes), KARL JOHN KARNAKY, Houston, Tex.

8. "The Family Physician and Cancer" (11:38 a.m., 22 minutes), J. ERNEST AYRE, The Cancer Institute of Miami, Miami, Fla.

Tuesday and Wednesday, 2:00 p.m.

9. "You Can Be Safe from X-Rays" (2:00 p.m., 10 minutes), LESTER M. PETRIE, Georgia Department of Public Health, Atlanta, Ga.

10. "The Use of Tantalum Mesh in Large or Recurrent Hernias" (2:10 p.m., 12 minutes), DAVID WOOLFOLK BARROW and LOUIS HAMMAN, JR., Lexington, Ky.

11. "Operative Cholangiography" (2:22 p.m., 20 minutes), N. FREDERICK HICKEN, Winthrop-Sterns, Inc., New York, N. Y.

12. "Regional Analgesia" (2:42 p.m., 30 minutes), DANIEL C. MOORE and JOHN J. BONICA, Winthrop-Stearns, Inc., New York, N. Y.

13. "Medullary Nailing for Fractures of the Shaft of the Tibia" (3:12 p.m., 25 minutes), J. OTTO LOTTES, LLOYD J. HILL, STANLEY M. LEYDIG and J. ALBERT KEY, Washington University School of Medicine, St. Louis, Mo.

14. "Medullary Nailing of Femurs" (3:37 p.m., 15 minutes), VIRGIL R. MAY, JR., McGuire Veterans Administration Hospital, Richmond, Va.

15. "Spinal Fusion" (3:52 p.m., 30 minutes), WILLIAM MINOR DEYERLE, McGuire Veterans Administration Hospital, Richmond, Va.

16. "Reconstructive Surgery of the Hand Following Thermal Burns" (4:22 p.m., 20 minutes), J. LEONARD GOLDNER, Duke University School of Medicine, Durham, N. C.

17. "Hemipelvectomy for Chondrosarcoma of the Acetabulum" (4:42 p.m., 20 minutes), HANES H. BRINDLEY, Scott and White Memorial Hospital, Temple, Tex.

18. "Femoral Head Prosthesis" (5:02 p.m., 15 minutes), JAMES HENDERSON CHERRY, Asheville, N. C.

SECTION ON GENERAL PRACTICE

Officers

Chairman—Dr. Stanley A. Hill, Corinth, Mississippi.
Vice-Chairman—Dr. James H. Byram, Atlanta, Georgia.
Secretary—Dr. Walter W. Sackett, Jr., Miami, Florida.

Monday, October 26, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 1, Atlanta, and was called to order by the Chairman, Dr. Stanley A. Hill, Corinth, Mississippi, who presided.

Dr. William R. Chambers, Atlanta, Georgia, read a paper entitled "Experiences in Service Intractable Headache" (Motion Picture), which was discussed by Dr. Eben Alexander, Jr., Winston-Salem, North Carolina; and in closing by the essayist.

The Chairman appointed the following Nominating Committee: Dr. Fount Richardson, Fayetteville, Arkansas, Chairman; Dr. W. H. Anderson, Booneville, Mississippi; and Dr. David G. Miller, Jr., Morgantown, Kentucky.

Dr. Hayden C. Nicholson, Little Rock, Arkansas, read a paper entitled "The Medical Curriculum and the General Practitioner," which was discussed by Dr. David G. Miller, Jr., Morgantown, Kentucky; and in closing by the essayist.

Dr. Guy T. Vise, Meridian, Mississippi, read a paper entitled "Cesarean Section: Another Technic of Low Cervical with Extraperitoneal Drainage" (Lantern Slides), which was discussed by Dr. James H. Byram, Atlanta, Georgia; and in closing by the essayist.

Dr. Stanley A. Hill, Corinth, Mississippi, read his Chairman's Address entitled "Practical Points in Elbow Fractures" (Lantern Slides), which was discussed by Dr. Theodore M. Oxford, Shreveport, Louisiana.

Dr. Lawrence F. Steffen, Kansas City, Missouri, read a paper entitled "Coronary Thrombosis," which was discussed by Dr. E. R. Cox, Dallas, Texas; and in closing by the essayist.

Dr. J. F. Hamilton, Memphis, Tennessee, read a paper entitled "Recurrent Erysipeloid Cellulitis in the Lower Extremities with Case Reports" (Lantern Slides), which was discussed by Dr. Thorburn S. McGowan, Savannah, Georgia; and in closing by the essayist.

The Section then adjourned until 12:00 noon Tuesday.

Tuesday, October 27, 12:00 noon

The Section met at the Dinkler-Plaza Hotel, Civic Room, Atlanta, for a luncheon meeting and was called to order by the Chairman, Dr. Hill, who presided.

Hon. James C. Davis, Representing Fifth Congressional District of Georgia, Clarkston, Georgia, gave an address entitled "Socialized Medicine and Free Enterprise."

Tuesday, October 27, 2:00 p.m.

The Section continued its meeting in the Municipal Auditorium, Room 1, Atlanta, and was called to order by the Chairman, Dr. Hill, who presided.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. Walter W. Sackett, Jr., Miami, Florida.
Vice-Chairman—Dr. Robert C. McElvain, St. Louis, Missouri.
Secretary—Dr. Thomas G. Goldsmith,* Greenville, South Carolina.

Dr. William L. Musser, Winter Park, Florida, read a paper entitled "Mental Retardation," which was discussed by Dr. Walter W. Sackett, Jr., Miami, Florida.

Dr. Stephen W. Brown, Augusta, Georgia, read a paper entitled "Cystic Disease of the Lungs" (Lantern Slides), which was discussed by Dr. Ted F. Leigh, Atlanta, Georgia; and in closing by the essayist.

Dr. Buford Word, Birmingham, Alabama, read a paper entitled "Pitfalls of Uterine Curettage" (Lantern Slides), which was discussed by Dr. Robert C. Haynes, Marshall, Missouri; and Dr. Louise Branscomb, Birmingham, Alabama.

Dr. Lay Martin, Baltimore, Maryland, read a paper entitled "Medical Treatment of Peptic Ulcer" (Lantern Slides), which was discussed by Dr. W. H. Anderson, Booneville, Mississippi.

Paper by Dr. Karl A. Meyer and Dr. Donald D. Kozoll, Chicago, Illinois, entitled "The Physiological Basis for the Surgical Treatment of Peptic Ulcer" (Lantern Slides), was read by Dr. Meyer, and was discussed by Dr. Thomas Harrold, Jr., Macon, Georgia; Dr. Charles N. Slater, Clarksburg, West Virginia; Dr. Lay Martin, Baltimore, Maryland; Dr. John W. Scott, Lexington, Kentucky; and in closing by Dr. Meyer.

The Section then adjourned *sine die*.

*Dr. Goldsmith found he would not be able to serve as Secretary of the Section and gave his resignation to the President, Dr. Alphonse McMahon. Dr. McMahon appointed Dr. Guy T. Vise, Meridian, Mississippi.

SECTION ON MEDICINE

Officers

Chairman—Dr. George T. Harrell, Winston-Salem, North Carolina.
Chairman-Elect—Dr. Vince Moseley, Charleston, South Carolina.
Vice-Chairman—Dr. Daniel L. Sexton, St. Louis, Missouri.
Secretary—Dr. R. Wayne Rundles, Durham, North Carolina.

Tuesday, October 27, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 3, Atlanta, and was called to order by the Chairman, Dr. George T. Harrell, Winston-Salem, North Carolina, who presided.

Dr. Joe E. Holoubek, Shreveport, Louisiana, read a paper entitled "Hernia Through the Esophageal Hiatus Simulating Coronary Pain: Report of Forty-Five Cases" (Lantern Slides), which was discussed by Dr. Vince Moseley, Charleston, South Carolina; Dr. George T. Harrell, Winston-Salem, North Carolina; and in closing by the essayist.

Paper by Dr. William P. Galen, Portland, Oregon, and Dr. Joseph E. Duke, Birmingham, Alabama, entitled "Outpatient Treatment of Hypertension with Hexamethonium and Apresoline" (Lantern Slides), was read by Dr. Duke, and was discussed by Dr. John H. Moyer, Houston, Texas; Dr. J. W. Scott, Lexington, Kentucky; Dr. C. P. Wofford, Johnson City, Tennessee; Dr. Paul D. Camp, Richmond, Virginia; Dr. E. Sterling Nichol, Miami, Florida; and in closing by Dr. Duke.

Paper by Dr. Martin S. Belle, Dr. Morton Halpern and Dr. L. Lemberg, Miami, Florida, entitled "The Initial Prognosis in Myocardial Infarction" (Lantern Slides), was read by Dr. Belle, and was discussed by Dr. E. Sterling Nichol, Miami, Florida; and Dr. Paul D. Camp, Richmond, Virginia.

Dr. George T. Harrell, Winston-Salem, North Carolina, read his Chairman's Address entitled "Alterations in Sodium and Potassium Within the Cells" (Lantern Slides and Scientific Exhibit).

Dr. Arthur J. Merrill, Atlanta, Georgia, read a paper entitled "Diagnosis and Management of Several Types of Renal Disease" (Scientific Exhibit), which was discussed by Dr. John H. Moyer, Houston, Texas; Dr. Daniel L. Sexton, St. Louis, Missouri; Dr. R. Wayne Rundles, Durham, North Carolina; and in closing by the essayist.

Dr. Russell S. Poor, Gainesville, Florida, read a paper entitled "Meeting the Health Needs in a Southern State—Florida," which was discussed by Dr. Wilburt C. Davison, Durham, North Carolina.

The Section then adjourned until 9:00 a.m. Wednesday.

Wednesday, October 28, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 3, Atlanta, and was called to order by the Chairman, Dr. Harrell, who presided.

Paper by Dr. J. C. Forbes, Dr. Paul D. Camp, Dr. William R. Jordan, Mr. O. M. Petterson and Mr. C. Korn, Richmond, Virginia, entitled "Serum Cholesterol Fractionation Studies" (Lantern Slides), was read by Dr. Forbes and was discussed by Dr. Ambrose McGee, West Palm Beach, Florida; Dr. George T. Harrell, Winston-Salem, North Carolina; Dr. Frank W. Pickell, Baton Rouge, Louisiana; Dr. J. F. A. McManus, Birmingham, Alabama; and in closing by Dr. Forbes.

Dr. Gould A. Andrews, Oak Ridge, Tennessee, read a paper entitled "Clinical Significance of Hematologic Changes Resulting from Radiation" (Lantern Slides), which was discussed by Dr. Robert A. Hettig, Houston, Texas.

There was a Panel Discussion on Newer Technics and Problems in Medical Diagnosis, Dr. George T. Harrell, Winston-Salem, North Carolina, Moderator. Panel members were: Dr. John B. Hickman, Durham, North Carolina; Dr. J. F. A. McManus, Birmingham, Alabama; Dr. Frank W. Fales, Emory University, Georgia; Dr. Marshall Brucer, Oak Ridge, Tennessee; Dr. Ellard M. Yow, Houston, Texas; and Dr. Max Michael, Jr., Chamblee, Georgia.

Following the Panel there was a question and answer period.

The Section then adjourned until 9:00 a.m. Thursday.

Thursday, October 29, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 3, Atlanta, and was called to order by the Chairman, Dr. Harrell, who then called upon the Secretary, Dr. R. Wayne Rundles, Durham, North Carolina, to preside.

Paper by Dr. William E. Lawrence and Dr. Stanley S. Kahn, Birmingham, Alabama, entitled "Oral Mercurial Diuretics: A Clinical Evaluation" (Lantern Slides) was read by Dr. Kahn, and was discussed by Dr. Ernest H. Yount, Winston-Salem, North Carolina, and in closing by Dr. Kahn.

Dr. Arthur V. Williams, Jr., Charleston, South Carolina, read a paper entitled "A Simplified Method of Peritoneal Lavage in the Treatment of Uremia" (Lantern Slides), which was discussed by Dr. C. Warren Irvin, Columbia, South Carolina.

The Chairman appointed the following Nominating Committee: Dr. Ernest H. Yount, Winston-Salem, North Carolina, Chairman; Dr. Joe E. Holoubek, Shreveport, Louisiana; and Dr. Branch Craige, El Paso, Texas.

There was a Panel Discussion on Use of Newer Therapeutic Agents, Dr. Eugene B. Ferris, Jr., Atlanta, Georgia, Moderator. Members of the Panel: Dr. Ellard M. Yow, Houston, Texas; Dr. Ernest H. Yount, Winston-Salem, North Carolina; Dr. John H. Seabury, New Orleans, Louisiana; Dr. Gould A. Andrews, Oak Ridge, Tennessee; Dr. Charles M. Huguley, Jr., Emory University, Georgia; and Dr. Laurence H. Kyle, Washington, D. C.

Following the Panel there was a question and answer period.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. Vince Moseley, Charleston, South Carolina.
Chairman-Elect—Dr. Daniel L. Sexton, St. Louis, Missouri.

Vice-Chairman—Dr. Howard L. Holley, Birmingham, Alabama.
Secretary—Dr. R. Wayne Rundles, Durham, North Carolina.

The Section then adjourned *sine die*.

SECTION ON GASTROENTEROLOGY

Officers

Chairman—Dr. David Cayer, Winston-Salem, North Carolina.
Vice-Chairman—Dr. John M. Rumball, Coral Gables, Florida.
Secretary—Dr. John S. Atwater, Atlanta, Georgia.

Monday, October 26, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 3, Atlanta, and was called to order by the Chairman, Dr. David Cayer, Winston-Salem, North Carolina, who presided.

The Chairman appointed the following Nominating Committee: Dr. Milford O. Rouse, Dallas, Texas, Chairman; Dr. Gordon McHardy, New Orleans, Louisiana; Dr. Julian M. Ruffin, Durham, North Carolina; and Dr. John Tilden Howard, Baltimore, Maryland.

Paper by Dr. Richard D. Haines, Temple, Texas, and Dr. G. O. Wellman, Texas City, Texas, entitled "Lymphosarcoma of the Gastrointestinal Tract" (Lantern Slides), was read by Dr. Haines, and was discussed by Dr. McClaren Johnson, Atlanta, Georgia; Dr. William D. Davis, Jr., New Orleans, Louisiana; Dr. George E. Welch, New Orleans, Louisiana; Dr. Walter Lincoln Palmer, Chicago, Illinois; and in closing by Dr. Haines.

Dr. Clarence W. Legerton, Jr., Conway, South Carolina, read a paper entitled "The Clinical Picture of Channel Ulcer" (Lantern Slides), which was discussed by Dr. Milford O. Rouse, Dallas, Texas; and Dr. George E. Welch, New Orleans, Louisiana.

Dr. Walter Lincoln Palmer, Chicago, Illinois, read a paper entitled "The Medical Treatment of Peptic Ulcer" (Lantern Slides).

Dr. Vince Moseley, Charleston, South Carolina, read a paper entitled "Some Observations on the Plasma Antithrombin Test as a Diagnostic Aid" (Lantern Slides), which was discussed by Dr. John Tilden Howard, Baltimore, Maryland; Dr. George E. Welch, New Orleans, Louisiana; Dr. Jerome S. Levy, Little Rock, Arkansas; and in closing by the essayist.

There was a Panel Discussion on "The Management of Upper Gastrointestinal Bleeding." Dr. Julian M. Ruffin, Durham, North Carolina, Moderator. Members of the Panel: Dr. Walter Lincoln Palmer, Chicago, Illinois; Dr. Charles M. Caravati, Richmond, Virginia; Dr. John M. Rumball, Coral Gables, Florida; and Dr. A. H. Letton, Atlanta, Georgia.

The Section then adjourned until 2:00 p.m. Tuesday.

Tuesday, October 27, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 3, Atlanta, and was called to order by the Chairman, Dr. Cayer, who presided.

Paper by Dr. Joe H. Hardin, Dr. Jerome S. Levy, Dr. I. Meschan, and Dr. Lloyd Segar, Little Rock, Arkansas, entitled "A Comparison of the Antispasmodic Drugs" (Lantern Slides), was read by Dr. Levy, and was discussed by Dr. Charles W. Hock, Augusta, Georgia; Dr. Benjamin G. Oren, Miami, Florida; Dr. Arthur A. Herold, Sr., Shreveport, Louisiana; Dr. Gordon McHardy, New Orleans, Louisiana; and in closing by Dr. Levy.

Dr. Donald D. Carter, Durham, North Carolina, read a paper entitled "Giant Ulceration in Idiopathic Ulcerative Colitis Following ACTH or Cortisone Therapy" (Lantern Slides), which was discussed by Dr. Julian M. Ruffin, Durham, North Carolina; Dr. Kemp Plummer, Richmond, Virginia; Dr. Walter Lincoln Palmer, Chicago, Illinois; Dr. Donald F. Marion, Miami, Florida; and in closing by the essayist.

Dr. David Cayer, Winston-Salem, North Carolina, read his Chairman's Address, entitled "Dear School Alumni" (Lantern Slides).

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. John S. Atwater, Atlanta, Georgia.
Vice-Chairman—Dr. William A. Knight, Jr., St. Louis, Missouri.
Secretary—Dr. John M. Rumball, Coral Gables, Florida.

Dr. Cecil O. Patterson, Dallas, Texas, read a paper entitled "Regional Enteritis" (Lantern Slides), which was discussed by Dr. Leonard Posey, Jr., Jackson, Mississippi; and Dr. Napier Burson, Jr., Atlanta, Georgia.

There was a Panel Discussion on "Amebiasis," Dr. Donald F. Marion, Miami, Florida, Moderator. Panel members were: Dr. Gordon McHardy, New Orleans, Louisiana; Dr. Douglas H. Sprunt, Memphis, Tennessee; Dr. Marion M. Brooke, Chamblee, Georgia; Dr. David Cayer, Winston-Salem, North Carolina; and Dr. Walter Lincoln Palmer, Chicago, Illinois.

The Section then adjourned *sine die*.

SECTION ON NEUROLOGY AND PSYCHIATRY

Officers

Chairman—Dr. George S. Fultz, Jr., Richmond, Virginia.
Vice-Chairman—Dr. Harry M. Murdock, Baltimore, Maryland.
Secretary—Dr. James G. Galbraith, Birmingham, Alabama.

Tuesday, October 27, 2:00 p.m.

The Section met at a joint session with the Southern Electroencephalographic Society at the Municipal Auditorium, Room 7, Atlanta, and was called to order by the Chairman of the Section, Dr. George S. Fultz, Jr., Richmond, Virginia. Dr. Isadore S. Zfass, Richmond, Virginia, President of the Southern Electroencephalographic Society, presided over the session.

The Chairman appointed the following Nominating Committee: Dr. James G. Lyerly, Jacksonville, Florida, Chairman; Dr. James G. Galbraith, Birmingham, Alabama; and Dr. Joseph S. Skobba, Atlanta, Georgia.

Dr. Samuel C. Little, Birmingham, Alabama, read a paper entitled "Photogenic Epilepsy" (Lantern Slides), which was discussed by Dr. Peter Kellaway, Houston, Texas; Dr. Don L. Winfield, Memphis, Tennessee; Dr. Martin Towler, Galveston, Texas; Dr. Walter J. Otis, New Orleans, Louisiana; Dr. Curtis Marshall, Baltimore, Maryland; Dr. Isadore S. Zfass, Richmond, Virginia; and in closing by the essayist.

Paper by Dr. Don L. Winfield and Dr. C. D. Scheibert, Memphis, Tennessee, entitled "Psychomotor Epilepsy in Brain Tumors" (Lantern Slides), was read by Dr. Winfield, and was discussed by Dr. Curtis Marshall, Baltimore, Maryland; Dr. Peter Kellaway, Houston, Texas; Dr. Donald S. Bickers, Atlanta, Georgia; Dr. Russell R. Monroe, New Orleans, Louisiana; and in closing by Dr. Winfield.

Dr. Frederic T. Zimmerman, New York, New York, read a paper entitled "Milontin and Other New Drugs in the Treatment of Petit Mal Epilepsy" (Lantern Slides and Scientific Exhibit), which was discussed by Dr. Paul Kells, Miami, Florida; Dr. Ephraim Roseman, Louisville, Kentucky; and in closing by the essayist.

Paper by Dr. Peter Kellaway and Dr. Robert Wise, Houston, Texas, entitled "Cerebral Dysfunction in Liver Disease: An Electroencephalographic Study" (Lantern Slides), was read by Dr. Kellaway, and was discussed by Dr. Martin Towler, Galveston, Texas; Dr. Curtis Marshall, Baltimore, Maryland; Dr. Richard Wilson, Atlanta, Georgia; and in closing by Dr. Kellaway.

Dr. A. Roy Tyrer, Memphis, Tennessee, read a paper entitled "Electroencephalographic Studies in Amateur Boxers," which was discussed by Dr. Ephraim Roseman, Louisville, Kentucky; Dr. Isadore S. Zfass, Richmond, Virginia; and in closing by the essayist.

Paper by Dr. Russell R. Monroe, Dr. Robert G. Heath, Dr. William Miller and Dr. Frank Ervin, New Orleans, Louisiana, entitled "The Effect of Sodium Amytal and Sodium Phenobarbital on the Electroencephalogram, Electrocorticogram, and Electrosubcorticogram in Humans" (Lantern Slides), was read by Dr. Monroe, and was discussed by Dr. Curtis Marshall, Baltimore, Maryland; Dr. Isadore S. Zfass, Richmond, Virginia; and in closing by Dr. Monroe.

The Section then adjourned until 2:00 p.m. Wednesday.

Wednesday, October 28, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 7, Atlanta, and was called to order by the Chairman, Dr. Fultz, who read his Chairman's Address entitled "Therapeutic Abortions."

Paper by Dr. Eben Alexander, Jr., and Dr. Courtland H. Davis, Jr., Winston-Salem, North Carolina, entitled "Hypo-

glossal Facial Anastomosis for the Correction of Peripheral Facial Palsy" (Lantern Slides), was read by Dr. Alexander, and was discussed by Dr. James G. Lyerly, Jacksonville, Florida; Dr. William R. Chambers, Atlanta, Georgia; and in closing by Dr. Alexander.

Dr. Leland B. Alford, St. Louis, Missouri, read a paper entitled "The Present Status of the Localization of Dementia" (Lantern Slides).

Paper by Dr. Arthur Arnold, Dr. Percival Bailey, Dr. Roger A. Harvey, Dr. Lewis Haas and Dr. John Laughlin, Chicago, Illinois, entitled "The Application of the Betatron to the Treatment of Brain Tumors" (Lantern Slides), was read by Dr. Arnold, and was discussed by Dr. James G. Galbraith, Birmingham, Alabama; Dr. James G. Lyerly, Jacksonville, Florida; and in closing by Dr. Arnold.

Dr. Harold I. Lief, New Orleans, Louisiana, read a paper entitled "Some Errors in the Diagnosis of Patients Labeled 'Psycho'," which was discussed by Dr. Russell R. Monroe, New Orleans, Louisiana; and in closing by the essayist.

Dr. Robert Dean Woolsey, St. Louis, Missouri, read a paper entitled "The Mechanism of the Neurological Symptoms and Signs in Spondylolisthesis" (Lantern Slides), which was discussed by Dr. James G. Lyerly, Jacksonville, Florida.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. Harry M. Murdock, Baltimore, Maryland.
Vice-Chairman—Dr. William A. Smith, Atlanta, Georgia.
Secretary—Dr. James G. Galbraith, Birmingham, Alabama.

The Section then adjourned *sine die*.

See page for Minutes of Southern Electroencephalographic Society, meeting conjointly with Section on Neurology and Psychiatry.

SECTION ON PEDIATRICS

Officers

Chairman—Dr. Preston A. McLendon, Washington, D. C.
Vice-Chairman—Dr. D. Lesesne Smith, Spartanburg, South Carolina.
Secretary—Dr. William G. Crook, Jackson, Tennessee.

Tuesday, October 27, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 5, Atlanta, and was called to order by the Chairman, Dr. Preston A. McLendon, Washington, D. C., who presided.

Dr. Walter Moore Hart, Florence, South Carolina, read a paper entitled "Experiences in the Management of Premature Infants in a Community Hospital" (Lantern Slides), which was discussed by Dr. Warren W. Quillian, Coral Gables, Florida; Dr. Preston A. McLendon, Washington, D. C.; Dr. G. D. Johnson, Spartanburg, South Carolina; Dr. Walter W. Sackett, Jr., Miami, Florida; Dr. Charles T. Herbert, Cape Girardeau, Missouri; Dr. Margaret Mary Nicholson, Washington, D. C.; and in closing by the essayist.

Dr. Robert A. Sears, Atlanta, Georgia, read a paper entitled "Recent Advances in the Management of Hydrocephalus," which was discussed by Dr. James G. Galbraith, Birmingham, Alabama; Dr. G. D. Johnson, Spartanburg, South Carolina; Dr. Walter Moore Hart, Florence, South Carolina; Dr. James C. Overall, Nashville, Tennessee; and in closing by the essayist.

Dr. M. Hines Roberts, Atlanta, Georgia, read a paper entitled "Extreme Eosinophilia Encountered in Childhood with Reports of Cases" (Lantern Slides), which was discussed by Dr. Walter H. Sheldon, Atlanta, Georgia; Dr. A. A. Shawkey, Charleston, West Virginia; Dr. S. J. Kranson, Independence, Missouri; and in closing by the essayist.

There was a resolution presented on the death of Dr. Luther W. Holloway, Jacksonville, Florida. Dr. Holloway was Chairman of the Section on Pediatrics in 1935, presiding over the Section at the St. Louis meeting that year, and was the member of the Council representing Florida 1936-1940. The following resolution was unanimously adopted by rising vote:

WHEREAS, The Divine Master has called Luther W. Holloway, to his great reward; and

WHEREAS, The Southern Medical Association, the American Academy of Pediatrics, and the State Pediatric Society of Florida have lost a distinguished member; and

WHEREAS, The loss to the profession in general and the pediatric profession of Jacksonville, Florida, in particular, is felt so keenly in his passing; and

WHEREAS, Words cannot express his great value to the profession as a pediatrician, to the community as a civic benefactor, to his patients as a skillful and sympathetic physician, to his loved ones as a wise father and an understanding counsellor; be it

RESOLVED, That the Section on Pediatrics of the Southern Medical Association records this resolution as an integral part of the proceedings of this meeting in Atlanta, Georgia, this twenty-seventh day of October, 1953, and that a copy be sent to Mrs. Holloway and his beloved family as an expression of sympathy in their bereavement of his passing and an expression of our deep sense of loss of a great, dynamic, loyal and conscientious member, as well as a jovial friend and companion.

Dr. Joseph B. Miller, Mobile, Alabama, read a paper entitled "Humidification in Pediatrics: A Progress Report" (Lantern Slides), which was discussed by Dr. W. Ambrose McGee, West Palm Beach, Florida; Dr. Lewis H. Bosher, Jr., Richmond, Virginia; and in closing by the essayist.

Dr. John P. McGovern, Washington, D. C., read a paper entitled "Iron Deficiency Anemia in Infancy and Childhood: A Controlled Study of the Pattern of Response in 50 Treated Patients" (Lantern Slides), which was discussed by Dr. Wilburt C. Davison, Durham, North Carolina.

The Chairman appointed the following Nominating Committee: Dr. Harvey F. Garrison, Jackson, Mississippi, Chairman; Dr. Warren W. Quillian, Coral Gables, Florida; and Dr. George D. Johnson, Spartanburg, South Carolina.

The Section then adjourned until 9:00 a.m. Wednesday.

Wednesday, October 28, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 5, Atlanta, and was called to order by the Chairman, Dr. McLendon, who presided.

Dr. Harold P. Jackson, Greenville, South Carolina, read a paper entitled "The Management of Erythroblastosis" (Lantern Slides), which was discussed by Dr. Oscar B. Hunter, Jr., Washington, D. C.; and Dr. James B. Overall, Nashville, Tennessee.

Dr. Albert M. Hand, Memphis, Tennessee, read a paper entitled "Pseudomonas (Pyocyaneus) Infections" (Lantern Slides), which was discussed by Dr. William F. Friedewald, Atlanta, Georgia; Dr. Thomas V. Patterson, Dallas, Texas; and in closing by the essayist.

Dr. C. Christopher Morris, II, Galveston, Texas, read a paper entitled "Clinical Approach to the Whole Child: Case Report," which was discussed by Dr. William G. Crook, Jackson, Tennessee; Dr. Carroll M. Pounders, Oklahoma City, Oklahoma; Dr. Margaret Mary Nicholson, Washington, D. C.; Dr. W. C. Verdery, Fayetteville, North Carolina; and by the essayist in closing.

Dr. Preston A. McLendon, Washington, D. C., read his Chairman's Address entitled "Developing Problems in Pediatric Practice."

Dr. Floyd W. Denny, Jr., Nashville, Tennessee, read a paper entitled "Prevention of Rheumatic Fever" (Lantern Slides), which was discussed by Dr. William G. Crook, Jackson, Tennessee; and in closing by the essayist.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. Amos Christie, Nashville, Tennessee.
Vice-Chairman—Dr. Joseph Yampolsky, Atlanta, Georgia.
Secretary—Dr. William G. Crook, Jackson, Tennessee.

The Section then adjourned until 9:00 a.m. Thursday.

Thursday, October 29, 9:00 a.m.

The Section on Pediatrics met conjointly with the Georgia Pediatric Society at the Municipal Auditorium, Room 5, Atlanta, and was called to order by the Chairman of the Section, Dr. Preston A. McLendon, Washington, D. C. Dr. Harold W. Muecke, Waycross, Georgia, President of the Georgia Pediatric Society, presided.

Dr. Wallace Sako, New Orleans, Louisiana, read a paper entitled "Management of Respiratory Infection Without Fever" (Lantern Slides).

Dr. Edith M. Lincoln, New York, New York, read a paper entitled "Early Diagnosis of Tuberculosis in Children" (Lantern Slides).

Dr. Willis J. Potts, Chicago, Illinois, read a paper entitled "Congenital Anomalies of the Gastrointestinal Tract" (Lantern Slides).

The joint meeting then adjourned *sine die*.

See page 416 for the minutes of the meeting of the Georgia Pediatric Society on Thursday, October 29.

SECTION ON PATHOLOGY

Officers

Chairman—Dr. H. R. Pratt-Thomas, Charleston, South Carolina.
Vice-Chairman—Dr. Bela Halpert, Houston, Texas.
Secretary—Dr. A. J. Gill, Dallas, Texas.

Monday, October 26, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 6, Atlanta, and was called to order by the Chairman, Dr. H. R. Pratt-Thomas, Charleston, South Carolina, who presided.

The Chairman appointed the following Nominating Committee: Dr. Cyrus C. Erickson, Memphis, Tennessee, Chairman; Dr. R. L. Holman, New Orleans, Louisiana; and Dr. R. H. Rigdon, Galveston, Texas.

Dr. R. H. Rigdon, Galveston, Texas, read a paper entitled "Spontaneous Regression of Neoplasms: An Experimental Study in the Duck," which was discussed by Dr. Bela Halpert, Houston, Texas; Dr. McKenzie P. Moore, Jr., Charleston, South Carolina; and in closing by the essayist.

Dr. Ernest E. Muirhead, Dallas, Texas, read a paper entitled "Malignant Hypertension Following Bilateral Nephrectomy with Emphasis on Factors Aggravating Its Evolution," which was discussed by Dr. Bela Halpert, Houston, Texas; Dr. Cyrus C. Erickson, Memphis, Tennessee; Dr. R. L. Holman, New Orleans, Louisiana; Dr. W. H. Sheldon, Atlanta, Georgia; Dr. H. R. Pratt-Thomas, Charleston, South Carolina; and in closing by the essayist.

Dr. R. L. Holman, New Orleans, Louisiana, read a paper entitled "Studies on the Role of Cholesterol in the Pathogenesis of Arterial Lesions," which was discussed by Dr. Bela Halpert, Houston, Texas; Dr. Ernest E. Muirhead, Dallas, Texas; and in closing by the essayist.

Dr. Jack C. Norris, Atlanta, Georgia, read a paper entitled "Krukenberg Tumors," which was discussed by Dr. R. H. Rigdon, Galveston, Texas; and in closing by the essayist.

Dr. McKenzie P. Moore, Jr., Charleston, South Carolina, read a paper entitled "Pathologic Aspects of Ascariasis," which was discussed by Dr. Thomas Lide, Winston-Salem, North Carolina; Dr. R. L. Holman, New Orleans, Louisiana; Dr. A. J. Gill, Dallas, Texas; and in closing by the essayist.

The Section then adjourned until 2:00 p.m. Tuesday.

Tuesday, October 27, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 6, Atlanta, and was called to order by the Chairman, Dr. H. R. Pratt-Thomas, Charleston, South Carolina, who read his Chairman's Address entitled "Cytologic Diagnosis: A Survey of Its Problems and Effectiveness as a Diagnostic Procedure," which was discussed by Dr. Bela Halpert, Houston, Texas; Dr. Jack C. Norris, Atlanta, Georgia; and Colonel J. M. Blumberg, Washington, D. C.

Dr. Douglas H. Sprunt, Memphis, Tennessee, read a paper entitled "Present Day Concepts of Pneumonia," which was discussed by Dr. A. J. Gill, Dallas, Texas; Dr. R. L. Holman, New Orleans, Louisiana; Dr. Jack C. Norris, Atlanta, Georgia; and in closing by the essayist.

Paper by Dr. Bela Halpert, Dr. Frances C. Whitcomb, Dr. Carrie C. McRoberts and Dr. Charles A. Carton, Houston, Texas, entitled "Systemic and Central Nervous System Involvement in Cryptococcosis and Coccidioidomycosis," was read by Dr. Carton, and was discussed by Dr. Oscar B. Hunter, Jr., Washington, D. C.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. Bela Halpert, Houston, Texas.
Vice-Chairman—Dr. A. J. Gill, Dallas, Texas.
Secretary—Dr. Gretchen V. Squires, Pensacola, Florida.

A Symposium "Discussion on Program Planning for Future Meetings of the Section" was opened by Dr. Cyrus C. Erickson, Memphis, Tennessee; Dr. H. R. Pratt-Thomas, Charleston, South Carolina, and Dr. A. J. Gill, Dallas, Texas; with participation of the entire Section membership.

It was moved and carried that every effort be made to have a joint meeting between the Section on Pathology and the College of American Pathologists, pertinent sections, and seek a joint meeting with some other clinical group, to be determined later by the Chairman of the Section.

The Section then adjourned *sine die*.

SECTION ON RADIOLOGY

Officers

Chairman—Dr. Robert D. Moreton, Fort Worth, Texas.
Vice-Chairman—Dr. Stephen W. Brown, Augusta, Georgia.
Secretary—Dr. J. Cash King, Memphis, Tennessee.

Tuesday, October 27, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 6, Atlanta, and was called to order by the Chairman, Dr. Robert D. Moreton, Fort Worth, Texas, who read his Chairman's Address entitled "Film Identification" (Lantern Slides), which was discussed by Dr. J. R. Winston, Temple, Texas; Dr. Mac Roy Gasque, Pisgah Forest, North Carolina; Dr. Joseph C. Bell, Louisville, Kentucky; Dr. Charles M. Gray, Tampa, Florida; Dr. Judson A. Graves, Jacksonville, Florida; and in closing by the essayist.

The Chairman appointed the following Nominating Committee: Dr. R. C. Pendergrass, Americus, Georgia, Chairman; Dr. Joseph C. Bell, Louisville, Kentucky; and Dr. John D. Peake, Mobile, Alabama.

Paper by Dr. Richard C. Boyer and Dr. Thomas R. Ramsay, Baton Rouge, Louisiana, entitled "Radiologic Aspects of Emphysema of the Chest" (Lantern Slides), was read by Dr. Boyer, and was discussed by Dr. Robert M. Tankesley, Atlanta, Georgia.

Paper by Dr. Joseph McK. Ivie and Dr. John H. Beveridge, Nashville, Tennessee, entitled "Roentgenologic Problems in Ulcers About the Pylorus" (Lantern Slides), was read by Dr. Ivie, and was discussed by Dr. Harry D. Pinson, Augusta, Georgia; and Dr. George K. Henshall, Chattanooga, Tennessee.

Paper by Dr. R. P. O'Bannon and Dr. Otto H. Grunow, Fort Worth, Texas, entitled "The Larynx and Pharynx Radiologically Considered" (Lantern Slides), was read by Dr. O'Bannon, and was discussed by Dr. William Wright Bryan, Atlanta, Georgia; and in closing by Dr. O'Bannon.

Dr. Charles L. Martin, Dallas, Texas, read a paper entitled "Treatment of Cancer of the Tongue and Its Cervical Node Metastases with Irradiation" (Lantern Slides), which was discussed by Dr. James A. Meadows, Jr., Birmingham, Alabama; and in closing by the essayist.

The Section adjourned until 9:00 a.m. Wednesday.

Wednesday, October 28, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 6, Atlanta, and was called to order by the Chairman, Dr. Moreton, who presided.

Dr. Peter E. Russo, Oklahoma City, Oklahoma, read a paper entitled "Changes of the Axillary Vein Produced by Radical Mastectomy" (Lantern Slides), which was discussed by Dr. Ted F. Leigh, Atlanta, Georgia; Dr. James J. Clark, Atlanta, Georgia; Dr. Joseph C. Bell, Louisville, Kentucky; Dr. Gerard Raap, Miami, Florida; Dr. Neal F. Yeomans, Waycross, Georgia; and in closing by the essayist.

Dr. Joseph C. Bell, Louisville, Kentucky, read a paper entitled "The Radiological Examination of the Urinary Tract" (Lantern Slides), which was discussed by Dr. John D. Peake, Mobile, Alabama; Dr. James J. Clark, Atlanta, Georgia; Dr. Robert M. Tankesley, Atlanta, Georgia; Dr. Peter E. Russo, Oklahoma City, Oklahoma; Dr. R. C. Pendergrass, Americus, Georgia; Dr. Charles McC. Gray, Tampa, Florida; Dr. Ted F. Leigh, Atlanta, Georgia; Dr. Robert D. Moreton, Fort Worth, Texas; Dr. Frederick K. Herpel, West Palm Beach, Florida; Dr. Herbert E. Olnick, Macon, Georgia; and in closing by the essayist.

Dr. Jesshill Love, Louisville, Kentucky, read a paper entitled "Coronal Effects Observed While Rotating a Film Within an X-ray Beam" (Lantern Slides), which was discussed by Dr. R. C. Pendergrass, Americus, Georgia; and Mr. J. H. Tolan, Atlanta, Georgia.

Paper by Dr. E. E. Seedorf, Dr. W. N. Powell, and Dr. D. N. Dysart, Temple, Texas, entitled "A Comparison of Five Gallbladder Media" (Lantern Slides), was read by Dr. Seedorf, and was discussed by Dr. Charles M. Gray, Tampa, Florida; Dr. David G. Pugh, Rochester, Minnesota; and in closing by Dr. Seedorf.

Dr. David G. Pugh, Rochester, Minnesota, read a paper entitled "Malacic Disease of Bone" (Lantern Slides).

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. Stephen W. Brown, Augusta, Georgia.
Vice-Chairman—Dr. J. Cash King, Memphis, Tennessee.
Secretary—Dr. Charles McC. Gray, Tampa, Florida.

The Section then adjourned *sine die*.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

Officers

Chairman—Dr. Martin F. Engman, Jr., St. Louis, Missouri.
Vice-Chairman—Dr. Joseph M. Hitch, Raleigh, North Carolina.
Secretary—Dr. Ray O. Noojin, Birmingham, Alabama.

Monday, October 26, 9:30 a.m.

The Section met at the Grady Memorial Hospital for case presentations by the Atlanta Dermatological Society, followed by a Dutch Luncheon, Atlanta Biltmore Hotel, and discussion of cases at the Academy of Medicine.

Tuesday, October 27, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 8, Atlanta, and was called to order by the Chairman, Dr. Martin F. Engman, Jr., St. Louis, Missouri, who read his Chairman's Address entitled "Eczema of the Hands in Housewives."

Dr. Edward H. Reinhard, St. Louis, Missouri, read a paper entitled "Malignant Blood Dyscrasias: I. Dermatologic Manifestations. II. Newer Method of Therapy of the Leukemias and Lymphomas" (Lantern Slides).

Dr. Robert N. Buchanan, Jr., Nashville, Tennessee, read a paper entitled "The Present Day Status of Atabrine in the Treatment of Lupus Erythematosus" (Lantern Slides), which was discussed by Dr. Howard P. Steiger, Charlotte, North Carolina; Dr. William C. Croom, Jr., Jacksonville, Florida; Dr. Howard Hailey, Atlanta, Georgia; Dr. E. A. Livingston, Gibson, North Carolina; and in closing by the essayist.

Dr. Hal E. Freeman, Springfield, Missouri, read a paper entitled "Seborrhea-Psoriasis-Syndrome" (Lantern Slides), which was discussed by Dr. Paul Mapother, Louisville, Kentucky; Dr. James W. Burks, Jr., New Orleans, Louisiana; Dr. Thomas W. Murrell, Richmond, Virginia; and in closing by the essayist.

The Chairman appointed the following Nominating Committee: Dr. W. A. Showman, Tulsa, Oklahoma, Chairman; Dr. J. W. Anderson, Norfolk, Virginia; and Dr. L. D. McLean, New Orleans, Louisiana.

Dr. Howard Hailey, Atlanta, Georgia, read a paper entitled "Bilateral Herpes Zoster" (Lantern Slides), which was discussed by Dr. Garold V. Stryker, St. Louis, Missouri; Dr. Clayton E. Wheeler, Charlottesville, Virginia; Dr. V. Medd Henington, New Orleans, Louisiana; Dr. Irving David London, Montgomery, Alabama; Dr. E. A. Livingston, Gibson, North Carolina; Dr. Martin F. Engman, Jr., St. Louis, Missouri; and in closing by the essayist.

The Section recognized Dr. Thomas W. Murrell as the only one present of the group who organized the Section at the Chattanooga meeting in 1922.

Dr. G. P. Lingenfelter, Denver, Colorado, who has attended many meetings of the Association and its Section on Dermatology and Syphilology was made an Honorary Member of the Section.

The Section then adjourned until 9:00 a.m. Wednesday.

Wednesday, October 28, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 8, Atlanta, and was called to order by the Chairman, Dr. Engman, who presided.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. William L. Dobes, Atlanta, Georgia.
Vice-Chairman—Dr. Joseph Grindon, Jr., St. Louis, Missouri.
Secretary—Dr. Ray O. Noojin, Birmingham, Alabama.

Paper by Dr. V. Medd Henington, Dr. Barrett Kennedy and Dr. John Brueck, New Orleans, Louisiana, entitled "The Deep Mycotic Infections of the Skin," was read by Dr. Henington, and was discussed by Dr. Raymond J. Sherer, Birmingham, Alabama; Dr. Hugh B. Praytor, Montgomery, Alabama; Dr. Hal E. Freeman, Springfield, Missouri; Dr. Francis A. Ellis, Baltimore, Maryland; Dr. James W. Burks, Jr., New Orleans, Louisiana; and in closing by the essayist.

Dr. A. H. Lancaster, Knoxville, Tennessee, read a paper entitled "Hormonal Influence in Lichen Planus," which was discussed by Dr. Thomas W. Murrell, Jr., Richmond, Virginia; Dr. Philip Henry Nippert, Atlanta, Georgia; and in closing by the essayist.

Dr. Thomas W. Murrell, Richmond, Virginia, read a paper entitled "A Suggested Plan for Undergraduate Dermatological Teaching" (Lantern Slides), which was discussed by Dr. Herbert S. Alden, Atlanta, Georgia; Dr. Paul G. Reque, Birmingham, Alabama; Dr. H. M. Robinson, Sr., Baltimore, Maryland; and Dr. J. Fred Mullins, Galveston, Texas.

Dr. Irwin E. Phillips, Bristol, Tennessee, read a paper entitled "Erythema Infectiosum: Clinical and Epidemiological Observations" (Lantern Slides), which was discussed by Dr. Edward P. Cawley, Charlottesville, Virginia; and Dr. James Malcolm Bazemore, Augusta, Georgia.

Dr. Robert C. Thompson, Chattanooga, Tennessee, read a paper entitled "Ringworm of the Hands due to Trichophyton Rubrum: Diagnosis and Treatment" (Lantern Slides), which was discussed by Dr. Joseph L. Hundley, Orlando, Florida; Dr. Joel W. Wyman, Anderson, South Carolina; Dr. Everett Seale, Houston, Texas; Dr. Herbert S. Alden, Atlanta, Georgia; Dr. Irving David London, Montgomery, Alabama; and in closing by the essayist.

Paper by Dr. H. M. Robinson, Sr., and Dr. R. C. V. Robinson, Baltimore, Maryland, entitled "A New Approach to the Local Therapy of Alopecia Areata" (Lantern Slides), was read by Dr. R. C. V. Robinson, and was discussed by Dr. William L. Dobes, Atlanta, Georgia; Dr. George C. Smith, Florence, South Carolina; and in closing by Dr. H. M. Robinson, Sr.

The Section then adjourned *sine die*.

SECTION ON ALLERGY

Officers

Chairman—Dr. Ralph Bowen, Houston, Texas.
Vice-Chairman—Dr. George W. Owen, Jackson, Mississippi.
Secretary—Dr. H. Whitney Boggs, Shreveport, Louisiana.

Monday, October 26, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 5, Atlanta, and was called to order by the Vice-Chairman, Dr. George W. Owen, Jackson, Mississippi, who presided.

Dr. Marion T. Davidson, Birmingham, Alabama, read a paper entitled "Cancer and the Arthus Phenomenon," which was discussed by Dr. Warren F. Kahle, Houston, Texas; Dr. Lloyd D. Mayer, Lexington, Kentucky; and in closing by the essayist.

Dr. Maurice S. Segal, Boston, Massachusetts, read a paper entitled "Physiological Management of the Patient with Chronic Pulmonary Emphysema" (Lantern Slides), which was discussed by Dr. Vincent J. Derbes, New Orleans, Louisiana; Dr. Milton M. Coplan, Miami, Florida; and in closing by the essayist.

Dr. Paul T. Petit, Beaumont, Texas, read a paper entitled "Smoking and Its Influence on Respiratory Allergy," which was discussed by Dr. Johnny A. Blue, Oklahoma City, Oklahoma; and Dr. Orval R. Withers, Kansas City, Missouri.

Dr. Mason I. Lowance, Atlanta, Georgia, read a paper entitled "These Changing Times—Present-Day Treatment of Asthmatic Patients" (Lantern Slides).

Dr. Eugene B. Ferris, Atlanta, Georgia, read a paper entitled "Bronchial and Cardiac Asthma: Similarities and Differences."

Papers of Dr. Lowance and Dr. Ferris were discussed by Dr. George W. Owen, Jackson, Mississippi; Dr. Maurice S. Segal, Boston, Massachusetts; Dr. Henry D. Ogden, New Orleans, Louisiana; and in closing by Dr. Lowance and Dr. Ferris.

Dr. A. Ford Wolf, Temple, Texas, read a paper entitled "Allergy of the Eyelids" (Lantern Slides), which was discussed by Dr. Edna S. Pennington, Nashville, Tennessee; Dr. Edley H. Jones, Vicksburg, Mississippi; and in closing by the essayist.

The Section then adjourned until 12:00 noon Tuesday.

Tuesday, October 27, 12:00 noon

The Section met at the Dinkler-Plaza Hotel, Atlanta, for a luncheon meeting and was called to order by the Chairman, Dr. Bowen, who presided.

Dr. Chauncey D. Leake, Galveston, Texas, read a paper entitled "Leonardo da Vinci and His Influence on Medicine."

The Section then adjournel until 2:00 p.m.

Tuesday, October 27, 2:00 p.m.

The Section reconvened at the Municipal Auditorium, Room 5, and was called to order by the Chairman, Dr. Ralph Bowen, Houston, Texas, who read his Chairman's Address entitled "Achilles Heel in Allergy."

Dr. Maurice S. Segal, Boston, Massachusetts, read a paper entitled "Advances in Inhalational Therapy" (Lantern Slides), which was discussed by Dr. Hal M. Davison, Atlanta, Georgia; Dr. Lloyd D. Mayer, Lexington, Kentucky; and in closing by the essayist.

Paper by Dr. Allan Bloxsom, Houston, Texas, entitled "The Use of a New Apparatus for Continuous Nebulization Therapy" was read by Dr. W. Ambrose McGee, West Palm Beach, Florida, in the absence of Dr. Bloxsom, and was discussed by Dr. Maurice S. Segal, Boston, Massachusetts.

There was a Round-Table Discussion on "Pediatric Atopic Dermatitis (Eczema)," Dr. Walter L. Rucks, Memphis, Tennessee, Moderator. Participants in the discussion were: Dr. William Weston, Jr., Columbia, South Carolina, "Etiology" (Lantern Slides); Dr. F. Lee Bivings, Atlanta, Georgia, "Differential Diagnosis" (Lantern Slides); Dr. Carroll M. Pounders, Oklahoma City, Oklahoma, "Treatment;" and Dr. James C. Overall, Nashville, Tennessee, "Treatment, Oral and Topical."

The Chairman appointed the following Nominating Committee: Dr. Walter L. Rucks, Memphis, Tennessee, Chairman; Dr. Carroll M. Pounders, Oklahoma City, Oklahoma; and Dr. James C. Overall, Nashville, Tennessee.

Paper by Dr. Boen Swinny, San Antonio, Texas, entitled "Iodide Reactions," was read by Dr. A. Ford Wolf, Temple, Texas, in the absence of Dr. Swinny, and was discussed by Dr. Henry D. Ogden, New Orleans, Louisiana.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. George W. Owen, Jackson, Mississippi.
Vice-Chairman—Dr. H. Whitney Boggs, Shreveport, Louisiana.
Secretary—Dr. A. Ford Wolf, Temple, Texas.

The Section then adjourned *sine die*.

SECTION ON PHYSICAL MEDICINE AND REHABILITATION

Officers

Chairman—Dr. Sedgwick Mead, St. Louis, Missouri.
Vice-Chairman—Dr. Edward M. Krusen, Jr., Dallas, Texas.
Secretary—Dr. Harriet E. Gillette, Atlanta, Georgia.

Monday, October 26, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 7, Atlanta, and was called to order by the Chairman, Dr. Sedgwick Mead, St. Louis, Missouri, who read his Chairman's Address entitled "Responsibilities and Privileges of the Psychiatrist."

The Chairman appointed the following Nominating Committee: Dr. George D. Wilson, Asheville, North Carolina, Chairman; Dr. Edward M. Krusen, Jr., Dallas, Texas; and Dr. A. Ray Dawson, Richmond, Virginia.

Dr. John S. Chapman, Dallas, Texas, read a paper entitled "Physical Measures in Treatment of Pulmonary Conditions" (Lantern Slides), which was discussed by Dr. Ferdinand F. Schwartz, Birmingham, Alabama; Dr. George D. Wilson, Asheville, North Carolina; and in closing by the essayist.

Dr. Odon F. Von Werssowetz, Gonzales, Texas, read a paper entitled "Flexion Exercises in Treatment of Low-Back Conditions" (Lantern Slides), which was discussed by Dr. Florence I. Mahoney, Memphis, Tennessee; Dr. J. T. Scott, New Orleans, Louisiana; Dr. Arthur M. Pruce, Atlanta, Georgia; and in closing by the essayist.

Dr. George D. Wilson, Asheville, North Carolina, read a paper entitled "Management of Non-Disc Pain in Back and Legs with Microtherm (Radar) Using Director D" (Lantern Slides), which was discussed by Dr. Jack B. Mohney, Warm Springs, Georgia; Dr. J. T. Scott, New Orleans, Louisiana; Dr. Harriet E. Gillette, Atlanta, Georgia; and in closing by the essayist.

Dr. Louis P. Britt, Memphis, Tennessee, read a paper entitled "Principles of Hand Rehabilitation" (Lantern Slides), which was discussed by Dr. Arthur M. Pruce, Atlanta, Georgia.

Dr. Ferdinand F. Schwartz, Birmingham, Alabama, read a paper entitled "Indications and Contraindications for Ultrasonics," which was discussed by Dr. Kenneth Phillips, Miami, Florida.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. Edward M. Krusen, Jr., Dallas, Texas.
Vice-Chairman—Dr. Harriet E. Gillette, Atlanta, Georgia.
Secretary—Dr. Louis P. Britt, Memphis, Tennessee.

The Section then adjourned *sine die*.

SECTION ON INDUSTRIAL MEDICINE AND SURGERY

Officers

Chairman—Dr. C. U. Dernehl, Texas City, Texas.
Vice-Chairman—Dr. Richard M. Adams, Shreveport, Louisiana.
Secretary—Dr. Mac Roy Gasque, Pisgah Forest, North Carolina.

Monday, October 26, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 8, Atlanta, and was called to order by the Chairman, Dr. C. U. Dernehl, Texas City, Texas, who read his Chairman's Address entitled "Recent Challenges in Industrial Medical Practice," which was discussed by Dr. P. L. Collinsworth, Atlanta, Georgia; Dr. Richard M. Adams, Shreveport, Louisiana; and Dr. James L. Hughes, Greer, South Carolina.

The Chairman appointed the following Nominating Committee: Dr. R. Lomax Wells, Washington, D. C., Chairman; Dr. C. U. Dernehl, Texas City, Texas; and Dr. J. M. Bosworth, Atlanta, Georgia.

Dr. Jean S. Felton, Oklahoma City, Oklahoma, read a paper entitled "Multiphasic Periodic Examinations in Industry, A Working Philosophy."

Dr. Oscar O. Selke, Jr., Houston, Texas, read a paper entitled "On the Job Rehabilitation," which was discussed by Dr. Richard M. Adams, Shreveport, Louisiana; Dr. C. U. Dernehl, Texas City, Texas; Dr. T. H. Roberts, Lakeland, Florida; Dr. L. M. Draper, Corpus Christi, Texas; and in closing by the essayist.

Dr. Ralph S. McLaughlin, Charleston, West Virginia, read a paper entitled "A Review of the Treatment of Chemical Burns of the Eye" (Lantern Slides), which was discussed by Dr. C. U. Dernehl, Texas City, Texas.

Dr. William C. Ford, Houston, Texas, read a paper entitled "Mental Hygiene in Industry," which was discussed by Dr. Jean S. Felton, Oklahoma City, Oklahoma; Dr. Mac Roy Gasque, Pisgah Forest, North Carolina; and in closing by the essayist.

The Section then adjourned until 2:00 p.m. Tuesday.

Tuesday, October 27, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 8, Atlanta, and was called to order by the Chairman, Dr. Dernehl, who presided.

Dr. Lester M. Petrie, Atlanta, Georgia, read a paper entitled "The Provision of Medical Services for Small Industries," which was discussed by Dr. Richard M. Adams, Shreveport, Louisiana; Dr. Edward M. Gunn, Hartsville, South Carolina; Dr. C. U. Dernehl, Texas City, Texas; and in closing by the essayist.

Dr. R. E. Eckardt, Linden, New Jersey, read a paper entitled "Occupational Cancer: Fact and Fancy" (Lantern Slides), which was discussed by Dr. Richard M. Adams, Shreveport, Louisiana; Dr. C. U. Dernehl, Texas City, Texas; and in closing by the essayist.

Dr. Harold J. McAlduff, Oak Ridge, Tennessee, read a paper entitled "Practical Control Measures for Employees Exposed to Ionizing Radiation Hazards: Industrial Hygiene Control," which was discussed by Dr. C. U. Dernehl, Texas City, Texas.

Dr. Bernard R. Nebel, Washington, D. C., read a paper entitled "Practical Control Measures for Employees Exposed to Ionizing Radiation Hazards: Medical Control," which was discussed by Dr. Harold J. McAlduff, Oak Ridge, Tennessee; and Dr. Jean S. Felton, Oklahoma City, Oklahoma.

Dr. J. M. Bosworth, Atlanta, Georgia, read a paper entitled "Can the Medical Profession Meet the Challenge of Industry?" which was discussed by Dr. R. Lomax Wells, Washington, D. C.; Dr. E. Van Buren, Atlanta, Georgia; Dr. Edward M. Gunn, Hartsville, South Carolina; Dr. Lester M. Petrie, Atlanta, Georgia; and Dr. C. U. Dernehl, Texas City, Texas.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. Richard M. Adams, Shreveport, Louisiana.
Vice-Chairman—Dr. J. M. Bosworth, Atlanta, Georgia.
Secretary—Dr. Mac Roy Gasque, Pisgah Forest, North Carolina.

The Section then adjourned *sine die*.

SECTION ON SURGERY

Officers

Chairman—Dr. John V. Goode, Dallas, Texas.
Vice-Chairman—Dr. John D. Martin, Jr., Emory University, Georgia.
Secretary—Dr. Donald W. Smith, Miami, Florida.

Monday, October 26, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 2, Atlanta, and was called to order by the Chairman, Dr. John V. Goode, Dallas, Texas, who read his Chairman's Address entitled "Dangerous Silent Gallstones," which was discussed by Dr. Alton Ochsner, New Orleans, Louisiana; Dr. Ira Ferguson, Atlanta, Georgia; Dr. R. L. Sanders, Memphis, Tennessee; and in closing by the essayist.

The Chairman appointed the following Nominating Committee: Dr. David Henry Poer, Atlanta, Georgia, Chairman; Dr. George D. Lilly, Miami, Florida; and Dr. R. Van Fletcher, Chattanooga, Tennessee.

Dr. Alton Ochsner, New Orleans, Louisiana, read a paper entitled "Treatment of Postphlebitic Sequelae" (Lantern Slides), which was discussed by Dr. George D. Lilly, Miami, Florida; Dr. David Woolfolk Barrow, Lexington, Kentucky; Dr. John V. Goode, Dallas, Texas; and in closing by the essayist.

Paper by Dr. Charles A. Hufnagel and Dr. Pierre Rabil, Washington, D. C., entitled "The Use of Vascular Graft in the Treatment of Obliterative Vascular Diseases and Aneurysm," was read by Dr. Hufnagel, and was discussed by Dr. Alton Ochsner, New Orleans, Louisiana; Dr. John V. Goode, Dallas, Texas; Dr. L. H. Bosher, Richmond, Virginia; and in closing by Dr. Hufnagel.

Dr. Robert J. Coffey, Washington, D. C., read a paper entitled "The Relationship of Acute and Chronic Cholecystitis to Acute Pancreatitis" (Lantern Slides).

Dr. William W. Shingleton, Durham, North Carolina, read a paper entitled "Chronic Pancreatitis" (Lantern Slides).

Papers of Dr. Coffey and Dr. Shingleton were discussed by Dr. John V. Goode, Dallas, Texas; Dr. Alton Ochsner, New Orleans, Louisiana; and in closing by Dr. Coffey and Dr. Shingleton.

Paper by Dr. Osler A. Abbott, Dr. William A. Hopkins and Dr. William E. Van Fleit, Emory University, Georgia, entitled "Experiences with the Surgical Correction of the Coarctation of the Aorta," was read by Dr. Abbott, and was discussed by Dr. George T. Henry, Barnesville, Georgia; Dr. Charles A. Hufnagel, Washington, D. C.; Dr. John V. Goode, Dallas, Texas; and in closing by Dr. Abbott.

The Section then adjourned until 2:00 p.m. Tuesday.

Tuesday, October 27, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 2, Atlanta, and was called to order by the Chairman, Dr. Goode, who presided.

Paper by Dr. W. C. Sealy and Dr. Gordon Carver, Durham, North Carolina, entitled "Peptic Ulceration of the Esophagus" (Lantern Slides), was read by Dr. Sealy, and was discussed by Dr. John V. Goode, Dallas, Texas; Dr. Champ Lyons, Birmingham, Alabama; Dr. L. H. Bosher, Richmond, Virginia; Dr. R. Van Fletcher, Chattanooga, Tennessee; and in closing by Dr. Sealy.

Dr. Champ Lyons, Birmingham, Alabama, read a paper entitled "The Problem of Cardiac Conduction Defects in General Surgical Patients," which was discussed by Dr. John V. Goode, Dallas, Texas; Dr. W. C. Sealy, Durham, North Carolina; and in closing by the essayist.

Dr. Richard B. Cattell, Boston, Massachusetts, read a paper entitled "Carcinoma of the Colon and Rectum" (Lantern Slides).

Paper by Dr. Truman G. Blocker, Jr., Dr. C. C. Snyder and Dr. S. R. Lewis, Galveston, Texas, entitled "The Late Care of the Severely Burned" (Lantern Slides), was read by Dr. Snyder, and was discussed by Dr. Donald W. Smith, Miami, Florida; and in closing by Dr. Snyder.

Dr. Fred W. Cooper, Jr., Emory University, Georgia, read a paper entitled "Transaxillary Approach for Dorsal Sympathectomy" (Lantern Slides), which was discussed by Dr. George D. Lilly, Miami, Florida; and in closing by the essayist.

The Section then adjourned until 2:00 p.m. Wednesday.

Wednesday, October 28, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 2, Atlanta, and was called to order by the Chairman, Dr. Goode, who presided.

Paper by Dr. Benjamin F. Byrd, Jr., and Dr. W. J. McGanity, Nashville, Tennessee, entitled "The Effect of Pregnancy on the Clinical Course of Malignant Melanoma" (Lantern Slides), was read by Dr. Byrd, and was discussed by Dr. W. F. Martin, Charlotte, North Carolina; and in closing by Dr. Byrd.

Paper by Dr. Richard M. Fleming and Dr. Rudolph E. Drosd, Miami, Florida, entitled "The Practical Management of Benign and Pre-Cancerous Breast Lesions" (Lantern Slides), was read by Dr. Fleming, and was discussed by Dr. John V. Goode, Dallas, Texas; Dr. J. Kelly Stone, New Orleans, Louisiana; Dr. Harold Hill, Atlanta, Georgia; and in closing by Dr. Fleming.

Dr. Amos R. Koontz, Baltimore, Maryland, read a paper entitled "Sliding Femoral Hernia," which was discussed by Dr. William P. Nicholson, Atlanta, Georgia; and in closing by the essayist.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. John D. Martin, Jr., Emory University, Georgia.
Vice-Chairman—Dr. Eugene Bricker,* St. Louis, Missouri.
Secretary—Dr. Donald W. Smith, Miami, Florida.

Paper by Dr. L. C. Buchanan, Dr. E. D. Grady, Dr. Lewis S. Riccardi and Dr. John D. Martin, Jr., Atlanta, Georgia, entitled "A Preliminary Evaluation of Hemigastrectomy and Vagectomy in Treatment of Peptic Ulcer" (Lantern Slides), was read by Dr. Buchanan.

Dr. Claude J. Hunt, Kansas City, Missouri, read a paper

*Dr. Bricker found he would not be able to serve as Vice-Chairman of the Section and gave his resignation to the President, Dr. Alphonse McMahon. Dr. McMahon appointed Dr. Robert W. Bartlett, St. Louis, Missouri.

entitled "Cancer of the Stomach with Description of Formation of Food Pouch in Gastrectomy" (Lantern Slides).

Paper of Dr. Buchanan, *et alii*, and paper of Dr. Hunt were discussed by Dr. R. L. Sanders, Memphis, Tennessee; Dr. John D. Martin, Jr., Atlanta, Georgia; and in closing by Dr. Buchanan.

Dr. Hawley H. Seiler, Tampa, Florida, read a paper entitled "Changing Trends in the Surgical Treatment of Pulmonary Tuberculosis" (Lantern Slides), which was discussed by Dr. Thomas O'Neill, Philadelphia, Pennsylvania; and in closing by the essayist.

The Section then adjourned *sine die*.

SECTION ON ORTHOPEDIC AND TRAUMATIC SURGERY

Officers

Chairman—Dr. W. Kelly West, Oklahoma City, Oklahoma.
Vice-Chairman—Dr. R. Beverly Raney, Chapel Hill, North Carolina.
Secretary—Dr. S. Benjamin Fowler, Nashville, Tennessee.

Tuesday, October 27, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 4, Atlanta, and was called to order by the Chairman, Dr. W. Kelly West, Oklahoma City, Oklahoma, who presided.

The Chairman appointed the following Nominating Committee: Dr. Oscar P. Hampton, Jr., St. Louis, Missouri, Chairman; Dr. Frank A. Stuart, Tulsa, Oklahoma; and Dr. Edward W. Cullipher, Miami, Florida.

Dr. R. D. Butterworth, Richmond, Virginia, read a paper entitled "Synovectomy in Treatment of Tuberculosis of the Knee in Children."

Paper by Dr. George B. Higley, Dr. R. Beverley Ray, Dr. W. L. Minear and Dr. R. E. Addison, Memphis, Tennessee, entitled "Surgical Treatment of Osseous Tuberculosis by Drainage and Streptomycin Therapy" (Lantern Slides), was read by Dr. Higley, and was discussed by Dr. Peter B. Wright, Augusta, Georgia; Dr. J. Hiram Kite, Atlanta, Georgia; Dr. S. Benjamin Fowler, Nashville, Tennessee; and in closing by Dr. Butterworth and Dr. Higley.

Paper by Dr. Robert Stempfel and Dr. Amos Christie, Nashville, Tennessee, entitled "Nonrachitic Bowing of the Tibia" (Lantern Slides), was read by Dr. Stempfel, and was discussed by Dr. J. Hiram Kite, Atlanta, Georgia, and in closing by Dr. Stempfel.

Paper by Dr. Antonio Berrios, Dr. Frank H. Stelling and Dr. Leslie C. Meyer, Greenville, South Carolina, entitled "Congenital Pseudoarthrosis of the Tibia" (Lantern Slides), was read by Dr. Berrios, and was discussed by Dr. John F. Lovejoy, Jacksonville, Florida; Dr. Rex Howard, Fort Worth, Texas; Dr. Leslie C. Meyer, Greenville, South Carolina; and in closing by Dr. Berrios.

Paper by Dr. Richard T. Odell and Dr. Earl P. Holt, St. Louis, Missouri, entitled "Congenital Dislocation of the Knee" (Lantern Slides), was read by Dr. Odell, and was discussed by Dr. Wood W. Lovell, Atlanta, Georgia; Dr. Jack Wickstrom, New Orleans, Louisiana; and in closing by Dr. Odell.

Paper by Dr. James B. Dalton, Jr., and Dr. Earnest B. Carpenter, Richmond, Virginia, entitled "Clinical Experiences with Epiphyseal Stapling" (Lantern Slides), was read by Dr. Dalton, and was discussed by Dr. Thomas Gucker, III, Warm Springs, Georgia; and in closing by Dr. Dalton.

The Section then adjourned until 9:00 a.m. Wednesday.

Wednesday, October 28, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 4, Atlanta, and was called to order by the Chairman, Dr. West, who presided.

Paper by Dr. Ralph W. Coonrad and Dr. Edward S. Whitesides, Durham, North Carolina, entitled "Traumatic Paraplegia: A Classification and Fifteen-Year Follow-Up" (Lantern Slides), was read by Dr. Coonrad, and was discussed by Dr. Paul L. Rieth, Atlanta, Georgia; Dr. J. A. Conroy, Nashville, Tennessee; Dr. William M. Deyerle, Richmond, Virginia; Dr. Harriet E. Gillette, Atlanta, Georgia; and in closing by Dr. Coonrad.

Paper by Dr. Daniel C. Riordan and Dr. Rufus H. Alldredge, New Orleans, Louisiana, entitled "Orthopedic Aspects of Leprosy" (Motion Picture), was read by Dr. Riordan.

Dr. James A. Dickson, Cleveland, Ohio, read a paper entitled "Management of Transcervical and Subcapital Fractures of the Femur" (Lantern Slides and Motion Picture), which was discussed by Dr. Mortimer D. Abrashkin, Miami Beach, Florida; and in closing by the essayist.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. R. Beverly Raney, Chapel Hill, North Carolina.
Vice-Chairman—Dr. George W. N. Eggers, Galveston, Texas.
Secretary—Dr. S. Benjamin Fowler, Nashville, Tennessee.

Dr. Oscar P. Hampton, Jr., St. Louis, Missouri, read a paper entitled "Priorities and Life Saving Measures in Multiple Injuries" (Lantern Slides), which was discussed by Dr. W. M. Ewing, Louisville, Kentucky.

Dr. Leonard T. Peterson, Washington, D. C., read a paper entitled "Hip Prosthesis" (Lantern Slides), which was discussed by Dr. W. Philip Warner, Jr., Atlanta, Georgia.

Dr. Jack K. Wickstrom, New Orleans, Louisiana, read a paper entitled "Arthrodesis of the Wrist" (Lantern Slides), which was discussed by Dr. Jack C. Hughston, Columbus, Georgia.

The Section then adjourned until 1:30 p.m.

Wednesday, October 28, 1:30 p.m.

The Section met at the Grady Memorial Hospital Auditorium, Atlanta, for a Clinical Orthopedic Program arranged by the Atlanta orthopedic and traumatic surgeons, J. Hiram Kite, Atlanta, Georgia, presided.

Dr. Lawson Thornton, Atlanta, read a paper entitled "Equalization of Leg Length by Subtrochanteric Shortening of Femur."

Dr. Wood W. Lovell, Atlanta, read a paper entitled "Spontaneous Dislocation of the Atlanto-Axial Joint."

Dr. Richard E. King, Atlanta, read a paper entitled "Typhoid Osteomyelitis of the Spine."

Dr. J. L. Kurtz, Atlanta, read a paper entitled "Fracture Dislocation of Head of Radius with Associated Fracture of Ulna."

Dr. H. Walker Jernigan, Atlanta, read a paper entitled "Fractures of Head of Radius."

Dr. William Bondurant, Atlanta, read a paper entitled "Wrist Joint Replacement for Multiple Osteochondroma."

Dr. W. Philip Warner, Jr., Atlanta, read a paper entitled "Too Enthusiastic Surgery for Bone Tumors."

Dr. Thomas P. Goodwyn, Atlanta, read a paper entitled "End Result in an Extreme Case of Equinovarus Deformity (Poliomyelitis)."

Dr. F. James Funk, Jr., Atlanta, read a paper entitled "Pelvic Fracture with Laceration of Iliac Artery by a Bone Spicule."

Dr. Robert P. Kelly, Atlanta, read a paper entitled "Treatment of Compression Fractures of the Spine Without Immobilization."

Dr. Paul Rieth, Atlanta, read a paper entitled "Treatment of Recurrent Disc Lesions with Prop-Latch Graft."

The Section then adjourned until 9:00 a.m. Thursday.

Thursday, October 29, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 4, Atlanta, and was called to order by the Chairman, Dr. West, who presided.

Paper by Dr. Richard N. Wrenn and Dr. Albert G. Smith, Durham, North Carolina, entitled "Chondromyxoid Fibroma" (Lantern Slides), was read by Dr. Wrenn.

Dr. Mary S. Sherman, New Orleans, Louisiana, read a paper entitled "Benign Lesions Often Mistaken for Bone Sarcoma" (Lantern Slides).

Paper of Drs. Wrenn and Smith and paper of Dr. Sherman were discussed by Dr. Everett Bishop, Atlanta, Georgia; Dr. Samuel B. Prevo, Nashville, Tennessee; and in closing by Dr. Wrenn and Dr. Sherman.

Dr. W. Kelly West, Oklahoma City, Oklahoma, read his Chairman's Address entitled "Repair of Benign Bone Tumors" (Lantern Slides).

Paper by Dr. Fred C. Reynolds and Dr. R. H. Ramsey, St. Louis, Missouri, entitled "The Use of Hydrocortisone (Compound F) in Orthopedic Surgery" was read by Dr. Reynolds, and was discussed by Dr. J. F. Hamilton, Memphis, Tennessee; Dr. Mortimer D. Abrashkin, Miami Beach, Florida; and in closing by Dr. Reynolds.

Paper by Dr. A. H. Crenshaw and Dr. Frank D. Wilson, Memphis, Tennessee, entitled "Surgical Treatment of Fractures of the Patella" (Lantern Slides), was read by Dr. Crenshaw.

Dr. Ira H. Rapp, Charlotte, North Carolina, read a paper entitled "The Use of Patellectomy" (Lantern Slides).

Paper of Drs. Crenshaw and Wilson and paper of Dr. Rapp were discussed by Dr. H. Walker Jernigan, Atlanta, Georgia; Dr. Robert P. Kelly, Emory University, Georgia; and in closing by Dr. Crenshaw and Dr. Rapp.

The Section then adjourned *sine die*.

SECTION ON GYNECOLOGY

Officers

Chairman—Dr. H. Hudnall Ware, Jr., Richmond, Virginia.
Vice-Chairman—Dr. William T. Black, Jr., Memphis, Tennessee.
Secretary—Dr. Willis E. Brown, Little Rock, Arkansas.

Tuesday, October 27, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 1, Atlanta, and was called to order by the Chairman, Dr. H. Hudnall Ware, Jr., Richmond, Virginia, who presided.

Dr. Cyrus C. Erickson, Memphis, Tennessee, read a paper entitled "The Pathologist Looks at Gynecologic Malignancy" (Lantern Slides).

Paper by Dr. Leonard Palumbo, Jr., and Dr. Robert A. Ross, Chapel Hill, North Carolina, entitled "Primary Squamous Cell Carcinoma of the Vagina," was read by Dr. Palumbo.

Dr. William F. Mengert, Dallas, Texas, read a paper entitled "Carcinoma of the Ovary."

Paper by Dr. Barton T. Smith, and Dr. W. O. Johnson, Louisville, Kentucky, entitled "Carcinoma of the Vulva: A Statistical Study," was read by Dr. Johnson.

Dr. John A. Wall, Houston, Texas, read a paper entitled "The Treatment of Carcinoma of the Cervix."

Dr. R. Gordon Douglas, New York, New York, read a paper entitled "Urological Complications Following Radiological and Surgical Treatment of Carcinoma of the Cervix."

The above six papers were discussed by Dr. R. E. C. Miller, Alexandria, Louisiana; Dr. Gilbert F. Douglas, Birmingham, Alabama; Dr. T. J. Smaha, Griffin, Georgia; Dr. J. W. Kelso, Oklahoma City, Oklahoma; and in closing by Dr. Wall, Dr. Mengert, Dr. Douglas and Dr. Johnson.

The Chairman appointed the following Nominating Committee: Dr. Waverly R. Payne, Newport News, Virginia, Chairman; Dr. Charles J. Collins, Orlando, Florida ;and Dr. William F. Mengert, Dallas, Texas.

The Section then adjourned until 2:00 p.m. Wednesday.

Wednesday, October 28, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 1, Atlanta, and was called to order by the Vice-Chairman, Dr. William T. Black, Jr., Memphis, Tennessee, who presided.

Dr. C. G. Sutherland, Little Rock, Arkansas, read a paper entitled "Experimental Studies on the Repair of Ureteral Injuries," which was discussed by Dr. William Nicholson Jones, Birmingham, Alabama.

Dr. H. Hudnall Ware, Jr., Richmond, Virginia, read his Chairman's Address entitled "Endometriosis."

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. William T. Black, Jr., Memphis, Tennessee.
Vice-Chairman—Dr. J. F. Lucas, Greenwood, Mississippi.
Secretary—Dr. Willis E. Brown, Little Rock, Arkansas.

Dr. Eugene T. Ellison, Texarkana, Texas, read a paper entitled "Results of Incomplete Pelvic Surgery," which was discussed by Dr. James F. Donnelly, Jr., Winston-Salem, North Carolina, Dr. Frank R. Lock, Winston-Salem, North Carolina; Dr. W. Z. Bradford, Charlotte, North Carolina; Dr. C. S. McMurray, Nashville, Tennessee; and in closing by the essayist.

Paper by Dr. Simon V. Ward, Dr. Julius T. Davis, Jr., and Dr. Thomas Benton Sellers, New Orleans, Louisiana, entitled "Morbidity and Mortality in Modern Gynecological Surgery: An Analysis of 1,000 Consecutive Private Cases," was read by Dr. Ward, and was discussed by Dr. Garth L. Jarvis, Galveston, Texas; Dr. Richard E. C. Miller, Alexandria, Louisiana; and in closing by Dr. Ward.

The Section then adjourned *sine die*.

SECTION ON OBSTETRICS

Officers

Chairman—Dr. W. C. Winn, Richmond, Virginia.
Vice-Chairman—Dr. Leo J. Hartnett, St. Louis, Missouri.
Secretary—Dr. Garth L. Jarvis, Galveston, Texas.

Wednesday, October 28, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 1, Atlanta, and was called to order by the Chairman, Dr. W. C. Winn, Richmond, Virginia, who presided.

Dr. Stanley F. Rogers, Houston, Texas, read a paper entitled "Modern Drug Therapy in Pregnancy Toxemia," which was discussed by Dr. Hugh B. McNally, Baltimore, Maryland; Dr. R. B. Cochran, Atlanta, Georgia; Dr. John Mover, Houston, Texas, and in closing by the essayist.

Dr. J. S. Fish, Atlanta, Georgia, read a paper entitled "Diagnosis and Management of Hemorrhage in the Last Trimester," which was discussed by Dr. Clarence Davis, Durham, North Carolina, and in closing by the essayist.

Dr. Thaddeus L. Montgomery, Philadelphia, Pennsylvania, read a paper entitled "Obstetrics and Cancer Diagnosis."

The Chairman appointed the following Nominating Committee: Dr. Hugh G. Hamilton, Kansas City, Missouri, Chairman; Dr. Frank R. Lock, Winston-Salem, North Carolina, and Dr. Norman Thornton, Jr., Charlottesville, Virginia.

Dr. George F. Schmitt, Jr., Miami, Florida, read a paper entitled "Diabetes in Pregnancy."

Paper by Dr. Charles E. Flowers, Jr., and Dr. Leon Levitt, Chapel Hill, North Carolina, entitled "The Effect of Improved Medical and Obstetrical Care Upon Fetal Salvage in Diabetics," was read by Dr. Flowers.

Papers by Dr. Schmitt and Drs. Flowers and Levitt were discussed by Dr. James Wortham, Little Rock, Arkansas.

The Section then adjourned until 9:00 a.m. Thursday.

Thursday, October 29, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 1, Atlanta, and was called to order by the Vice-Chairman, Dr. Leo J. Hartnett, St. Louis, Missouri, who presided.

Dr. John M. Glenn, Louisville, Kentucky, read a paper entitled "A Clinical Evaluation of a Simplified Method of Roentgen Pelvimetry," which was discussed by Dr. O. T. West, Fairfield, Alabama.

Dr. Louis H. Douglas, Baltimore, Maryland, read a paper entitled "Training of a Resident," which was discussed by Dr. Willis E. Brown, Little Rock, Arkansas.

Dr. W. C. Winn, Richmond, Virginia, read his Chairman's Address entitled "Induction of Labor," which was discussed by Dr. William M. Lester, Atlanta, Georgia; Dr. R. K. Hancock, Atlanta, Georgia, and in closing by the essayist.

Dr. Joseph B. Sheffery, Washington, D. C., read a paper entitled "A New Method of Determining Tubal Patency and Tubal Ciliary Activity," which was discussed by Dr. E. C. Gillespie, Little Rock, Arkansas; and in closing by the essayist.

Paper by Dr. William H. Vogt, Jr., and Dr. H. A. Ritter, St. Louis, Missouri, entitled "Fetal Salvage" was read by Dr. Vogt.

Paper by Dr. James F. Donnelly, Winston-Salem, North Carolina, entitled "Fetal Loss in Relation to Maternal Mortality" was read by Dr. Frank R. Lock, Winston-Salem, North Carolina, in the absence of Dr. Donnelly.

Papers by Drs. Vogt and Ritter and Dr. Donnelly were discussed by Dr. W. N. Thornton, Charlottesville, Virginia; Dr. Oscar B. Hunter, Jr., Washington, D. C.; Dr. Hugh G. Hamilton, Kansas City, Missouri; Dr. Helen Bellhouse, Atlanta, Georgia; and in closing by Dr. Ritter and Dr. Lock.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. Leo J. Hartnett, St. Louis, Missouri.
Vice-Chairman—Dr. Bayard Carter, Durham, North Carolina.
Secretary—Dr. Garth L. Jarvis, Galveston, Texas.

The Section then adjourned *sine die*.

SECTION ON UROLOGY

Officers

Chairman—Dr. Harold A. O'Brien, Dallas, Texas.
Vice-Chairman—Dr. Milton M. Coplan, Miami, Florida.
Secretary—Dr. A. Keller Doss, Fort Worth, Texas.

Tuesday, October 27, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 7, Atlanta, and was called to order by the Chairman, Dr. Harold A. O'Brien, Dallas, Texas, who presided.

Paper by Dr. E. C. St. Martin, Dr. James H. Campbell and Dr. C. M. Pasquier, Shreveport, Louisiana, entitled "Ureteral Complications of Radical Surgery for Carcinoma of the Cervix" (Lantern Slides), was read by Dr. St. Martin, and was discussed by Dr. J. Ullman Reaves, Mobile, Alabama; Dr. Park Nicelev, Knoxville, Tennessee; Dr. Monroe Wolf, New Orleans, Louisiana; Dr. Joseph W. Kelso, Oklahoma City, Oklahoma; and in closing by Dr. St. Martin.

The Chairman appointed the following Nominating Committee: Dr. Harold P. McDonald, Atlanta, Georgia, Chairman; Dr. Robert F. Sharp, New Orleans, Louisiana; and Dr. Robert Lich, Jr., Louisville, Kentucky.

Dr. Harold A. O'Brien, Dallas, Texas, read his Chairman's Address entitled "Hypospadias" (Lantern Slides and Motion Picture).

There followed a Symposium on "Evaluation of the Surgical Kidney Involved with Lithiasis."

Dr. Edgar Burns, New Orleans, Louisiana, read a paper entitled "Excretory and Retrograde Pyelography as an Aid in the Diagnosis of Renal Lithiasis" (Lantern Slides).

Dr. William F. Melick, St. Louis, Missouri, read a paper entitled "The Value of Aortography in Studying Lithiasis" (Lantern Slides).

Dr. Edwin L. Prien, Brookline, Massachusetts, read a paper entitled "Bacterial Study and Stone Analysis" (Lantern Slides).

Papers in the above Symposium were discussed by Dr. A. Keller Doss, Fort Worth, Texas; Dr. Hamilton W. McKay, Charlotte, North Carolina; Dr. Harold P. McDonald, Atlanta, Georgia; Dr. Milton M. Coplan, Miami, Florida; Dr. Grayson Carroll, St. Louis, Missouri; Dr. Rudolph Bell, Thomasville, Georgia; and in closing by Dr. Burns and Dr. Prien.

The Section then adjourned until 9:00 a.m. Wednesday.

Wednesday, October 28, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 7, Atlanta, and was called to order by the Chairman, Dr. O'Brien, who presided.

Paper by Dr. Norborne B. Powell and Dr. Elizabeth B. Powell, Houston, Texas, entitled "Vesical Allergy in Females" (Lantern Slides), was read by Dr. Norborne B. Powell, and was discussed by Dr. Milton M. Coplan, Miami, Florida; Dr. Grayson Carroll, St. Louis, Missouri; Dr. Joseph W. Kelso, Oklahoma City, Oklahoma; Dr. Ernest Felber, Atlanta, Georgia; Dr. Harold A. O'Brien, Dallas, Texas; and in closing by Dr. Norborne B. Powell.

Dr. Rubin H. Flocks, Iowa City, Iowa, read a paper entitled "Treatment of Carcinoma of Prostate" (Lantern Slides).

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. A. Keller Doss, Fort Worth, Texas.
Vice-Chairman—Dr. Charles E. Rieser, Atlanta, Georgia.
Secretary—Dr. Milton M. Coplan, Miami, Florida.

There was a joint session of the Section on Urology and the Section on Anesthesiology for a Panel Discussion on Anesthesia in Urology, Dr. Perry P. Volpitto, Augusta, Georgia, Moderator.

Participants in the Panel were: representing anesthesia, Dr. F. Gregg Horne, Durham, North Carolina, "Trilene in the Hospital and in the Office" (Lantern Slides); representing anesthesia, Dr. John L. Simmons and Dr. David A. Davis, Chapel Hill, North Carolina, "ACTH and Cortisone in Relation to Anesthesia and Surgery;" representing anesthesia, Dr. Lester Rumble, Jr., Atlanta, Georgia, "Premedication in the Aged Patient;" representing urology, Dr. Samuel L. Raines, Memphis, Tennessee, "Anesthesia in Prostatic Surgery;" representing urology, Dr. Robert Lich, Jr., Louisville, Kentucky; and in closing by the moderator, Dr. Volpitto, "Topical Anesthesia."

Following the Panel Discussion there was a question and answer period.

The joint session then adjourned, the Section on Urology to reconvene at 9:00 a.m. Thursday.

Thursday, October 29, 9:00 a.m.

GEORGIA DAY

The Section met at the Municipal Auditorium, Room 7, Atlanta, for a session arranged by the Georgia physicians, Dr. James H. Semans, Atlanta, member of the Fulton County Medical Society, presiding.

Paper by Dr. Earl Floyd, Dr. James L. Pittman and Dr. J. Candler Guy, Atlanta, entitled "Evaluation of Diagnostic Procedures in the Study of Renal Masses" (Lantern Slides), was read by Dr. Guy.

Dr. Irving Victor, Savannah, read a paper entitled "Somatic Manifestations of Genital Tract Disease in the Male" (Lantern Slides), which was discussed by Dr. Charles Rieser, Atlanta, Georgia.

Dr. J. Robert Rinker, Augusta, read a paper entitled "Epididymectomy, Conservative Treatment in Tuberculous Epididymitis" (Motion Picture), which was discussed by Dr. James Kimbrough, Washington, D. C.; Dr. Robert F. Sharp, New Orleans, Louisiana; Dr. James H. Semans, Atlanta, Georgia; and in closing by the essayist.

Dr. Charles E. Rieser, Atlanta, read a paper entitled "Medical Management Aimed at Prevention of Recurrence in Calculous Disease," which was discussed by Dr. J. Robert Rinker, Augusta, Georgia.

Dr. Rafe Banks, Jr., Gainesville, read a paper entitled "Spontaneous Rupture of Kidney: A Case Report" (Lantern Slides), which was discussed by Dr. John W. Frazier, Salisbury, North Carolina; Dr. Rex E. Van Duzen, Dallas, Texas; Dr. R. W. McAllister, Macon, Georgia; and in closing by the essayist.

Dr. Harold P. McDonald, Atlanta, read a paper entitled "Stones in the Prostate Gland: Removal by Transurethral Resection" (Lantern Slides), which was discussed by Dr. Irving Victor, Savannah, Georgia; Dr. Monroe Wolf, New Orleans, Louisiana; Dr. Edgar Burns, New Orleans, Louisiana; Dr. James Kimbrough, Washington, D. C.; and in closing by the essayist.

Dr. R. W. McAllister, Macon, read a paper entitled "Urinary Incontinence as Related to General Practice: Case Report" (Lantern Slides), which was discussed by Dr. Harold P. McDonald, Atlanta, Georgia; Dr. I. G. Duncan, Memphis, Tennessee; and in closing by the essayist.

Dr. James E. Kicklighter, Atlanta, read a paper entitled "Traumatic Rupture of the Urinary Bladder" (Lantern Slides), which was discussed by Dr. Monroe Wolf, New Orleans, Louisiana; Dr. Fred Turner, Orlando, Florida; and in closing by the essayist.

The Section then adjourned *sine die*.

SECTION ON PROCTOLOGY

Officers

Chairman—Dr. Claude G. Mentzer, Miami, Florida.
Vice-Chairman—Dr. Edgar Boling, Atlanta, Georgia.
Secretary—Dr. A. M. Phillips, Macon, Georgia.

Wednesday, October 28, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 6, Atlanta, and was called to order by the Chairman, Dr. Claude G. Mentzer, Miami, Florida, who read his Chairman's Address entitled "Complications and Resume of Results in Fourteen Years' Experience with Caudal Anesthesia and Oil-Soluble Anesthetics in Anorectal Surgery" (Lantern Slides).

The Chairman appointed the following Nominaitng Committee: Dr. Ronald F. Elkins, Springfield, Missouri, Chairman; Dr. Glenn G. Perry, High Point, North Carolina; and Dr. Fred B. Hodges, Jr., Atlanta, Georgia.

Paper by Dr. Herbert T. Hayes and Dr. Harry B. Burr, Houston, Texas, entitled "Hemorrhoidectomy with Special Reference to Anesthesia," was read by Dr. Burr, and was discussed by Dr. Ronald F. Elkins, Springfield, Missouri; Dr. Albert J. Ochsner, II, Alexandria, Louisiana; Dr. Marion C. Pruitt, Atlanta, Georgia; and in closing by Dr. Burr.

Dr. Edgar Boling, Atlanta, Georgia, read a paper entitled "Comparative Studies of Fecal Bacterial Flora After Antibiotics" (Lantern Slides), which was discussed by Dr. Ralph F. Allen, Miami, Florida.

Dr. John R. Butter, St. Petersburg, Florida, read a paper entitled "Acute Fulminating Enterocolitis Following the Use of Antibiotics," which was discussed by Dr. N. L. Andrews, Birmingham, Alabama.

The Section then adjourned until 9:00 a.m. Thursday.

Thursday, October 29, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 6, Atlanta, and was called to order by the Chairman, Dr. Mentzer, who presided.

Dr. W. W. Green, President, American Proctologic Society, Toledo, Ohio, read a paper entitled "The Treatment of Benign Tumors of the Colon and Rectum" (Lantern Slides).

Dr. George Williams, Jr., Miami, Florida, read a paper entitled "Anal Fistula: Anatomical and Surgical Considerations" (Lantern Slides), which was discussed by Dr. Glenn Perry, High Point, North Carolina; Dr. Mark M. Marks, Kansas City, Missouri; Dr. Claude G. Mentzer, Miami, Florida; and in closing by the essayist.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. A. M. Phillips, Macon, Georgia.
Vice-Chairman—Dr. Francis J. Burns, St. Louis, Missouri.
Secretary—Dr. Edgar Boling, Atlanta, Georgia.

Paper by Dr. George D. Vaughan, Richmond, Virginia and Dr. Harry E. Bacon, Philadelphia, Pennsylvania, entitled "Surgical Management of Chronic Ulcerative Colitis" (Lantern Slides and Scientific Exhibit), was read by Dr. Vaughan and was discussed by Dr. Earl Rasmussen, Atlanta, Georgia; Dr. Howard Trimpi, Philadelphia, Pennsylvania; Dr. Edgar Scott, Birmingham, Alabama; and in closing by the essayist.

Dr. James E. Ryan, Louisville, Kentucky, read a paper entitled "Proctologic Oddities" (Lantern Slides), which was discussed by Dr. Mark M. Marks, Kansas City, Missouri; and Dr. Glenn Perry, High Point, North Carolina.

The Section then adjourned *sine die*.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

Officers

Chairman—Dr. K. W. Cosgrove, Little Rock, Arkansas.
Chairman-Elect—Dr. E. W. Rucker, Jr., Birmingham, Alabama.
Vice-Chairman—Dr. F. Phinizy Calhoun, Jr., Atlanta, Georgia.
Secretary—Dr. F. A. Holden, Baltimore, Maryland.

Monday, October 26, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 4, Atlanta, and was called to order by the Chairman, Dr. K. W. Cosgrove, Little Rock, Arkansas, who presided.

The Chairman appointed the following Nominating Committee: Dr. W. Raymond McKenzie, Baltimore, Maryland, Chairman; Dr. Edley H. Jones, Vicksburg, Mississippi; and Dr. Murdock Equen, Atlanta, Georgia.

Dr. J. Mason Baird, Atlanta, Georgia, read a paper entitled "The Value of Irradiation in the Treatment of Certain Corneal Conditions," which was discussed by Dr. Louis A. Breffeilh, Shreveport, Louisiana; and in closing by the essayist.

Dr. James T. King, Atlanta, Georgia, read a paper entitled "Senile Tonsillar Gigantism: Report of a Case" (Lantern Slides).

Dr. Alton V. Hallum, Atlanta, Georgia, read a paper entitled "The Ocular Manifestations of Diabetes" (Lantern Slides), which was discussed by Dr. T. Weissner, Athens, Georgia; and in closing by the essayist.

Paper by Dr. Murdock Equen, Dr. George Roach and Dr. Robert Brown, Atlanta, Georgia, entitled "Fluoroscopy as an Aid in Removing Foreign Bodies from the Tracheobronchial Tree and Upper Gastrointestinal Tract" (Lantern Slides), was read by Dr. Equen.

Dr. F. Phinizy Calhoun, Jr., Atlanta, Georgia, read a paper entitled "The Significance of the Keratopathies" (Lantern Slides), which was discussed by Dr. Seymour B. Gostin, McKinney, Texas; and in closing by the essayist.

Dr. Lester A. Brown, Atlanta, Georgia, read a paper entitled "The Hyoid Bone Syndrome" (Lantern Slides), which was discussed by Dr. French K. Hansel, St. Louis, Missouri.

Dr. Thomas Manchester, Atlanta, Georgia, read a paper entitled "The X-Ray Diagnosis of Orbital Tumors" (Lantern Slides).

Dr. Edward Stephen Wright, Atlanta, Georgia, read a paper entitled "Contact Ulcer of the Larynx" (Lantern Slides), which was discussed by Dr. Murdock Equen, Atlanta, Georgia; Dr. Montgomery Short, Atlanta, Georgia; and in closing by the essayist.

The Section then adjourned until 2:00 p.m. Tuesday.

Tuesday, October 27, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 4, Atlanta, and was called to order by the Chairman, Dr. Cosgrove, who presided.

Dr. G. Dekle Taylor, Jacksonville, Florida, read a paper entitled "Hemoptysis" (Lantern Slides).

Dr. Alston Callahan, Birmingham, Alabama, presented a movie entitled "Extraction of Cataractous Lens after Filtering Glaucoma Operation."

Dr. Henry M. Goodyear, Cincinnati, Ohio, read a paper entitled "Maxillary Sinus Disease: Important Observations in Medical and Surgical Treatment" (Lantern Slides).

Dr. K. W. Cosgrove, Little Rock, Arkansas, read his Chairman's Address entitled "Allergy in Ophthalmology" (Lantern Slides).

Dr. Lyle M. Sellers, Dallas, Texas, read a paper entitled "Modern Applications of the Hearing Test: The Hand Tools of Today's Otologist" (Lantern Slides).

Dr. Albert N. Lemoine, Jr., Kansas City, Missouri, read a paper entitled "Fundus Pathology" (Lantern Slides).

Dr. Miles L. Lewis, Jr., New Orleans, Louisiana, read a paper entitled "Intracranial Complications of Middle Ear and Mastoid Disease: Report of Recent Cases" (Lantern Slides).

Dr. Gustav Bahn, New Orleans, Louisiana, read a paper entitled "The Treatment of Seborrheic Blepharitis" (Lantern Slides), which was discussed by Dr. K. W. Cosgrove, Little Rock, Arkansas; and in closing by the essayist.

The Section then adjourned until 2:00 p.m. Wednesday.

Wednesday, October 28, 2:00 p.m.

The Section met at the Municipal Auditorium, Room 4, Atlanta, and was called to order by the Chairman, Dr. Cosgrove, who presided.

Paper by Dr. Fred R. Guilford, Dr. William K. Wright, and Dr. C. O. Haug, Houston, Texas, entitled "The Complete Hearing Evaluation" (Lantern Slides), was read by Dr. Guilford.

Dr. William J. G. Davis, Washington, D. C., read a paper entitled "Accommodative Convergent Squint: Diagnosis and Treatment."

Dr. Henry M. Goodyear, Cincinnati, Ohio, read a paper entitled "The Treatment of Acute Frontal Sinus Infections and Eye Disturbance Secondary to Ethmoiditis" (Lantern Slides).

Dr. Albert N. Lemoine, Jr., Kansas City, Missouri, read a paper entitled "Interesting External Eye Conditions" (Lantern Slides).

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. E. W. Rucker, Jr., Birmingham, Alabama.
Chairman-Elect—Dr. Lyle M. Sellers, Dallas, Texas.
Vice-Chairman—Dr. French K. Hansel, St. Louis, Missouri.
Secretary—Dr. F. A. Holden, Baltimore, Maryland.

Dr. John E. Bordley, Baltimore, Maryland, read a paper entitled "Recent Observations on the Use of Nasopharyngeal Irradiation for the Control of Deafness in Children" (Lantern Slides).

Dr. Seymour B. Gostin, McKinney, Texas, read a paper entitled "Boeck's Sarcoidosis, Ocular and Systemic Manifestations" (Lantern Slides).

Dr. French K. Hansel, St. Louis, Missouri, read a paper entitled "The Effects of Tobacco Smoking Upon the Respiratory Tract."

The Section then adjourned *sine die*.

SECTION ON ANESTHESIOLOGY

Officers

Chairman—Dr. Albert J. Ochsner, II, Alexandria, Louisiana.
Vice-Chairman—Dr. David A. Davis, Chapel Hill, North Carolina.
Secretary—Dr. Earl F. Weir, Dallas, Texas.

Tuesday, October 27, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 2, Atlanta, and was called to order by the Chairman, Dr. Albert J. Ochsner, II, Alexandria, Louisiana, who read his Chairman's Address entitled "Anesthesiology Expands."

Dr. David A. Davis, Chapel Hill, North Carolina, read a paper entitled "The Pharmacology and Clinical Application of Succinylcholine" (Lantern Slides), which was discussed by Dr. Henry K. Beecher, Boston, Massachusetts; Dr. Donald H. Stubbs, Alexandria, Virginia; and in closing by the essayist.

Dr. Edwin L. Rushia, Augusta, Georgia, read a paper entitled "Management of Circulatory Problems in the Operating Room," which was discussed by Dr. Robert P. Walton, Charleston, South Carolina; and in closing by the essayist.

Dr. Fred E. Woodson, Tulsa, Oklahoma, a past Secretary, Vice-Chairman and Chairman of the Section on Anesthesiology and now Chairman of the Council and of the Executive Committee of the Council of the Southern Medical Association, brought greetings from the Council. He spoke of the progress in anesthesiology and of the value of this Section and the contribution the Section had made in advancing anesthesia in the South as a doctor of medicine specialty.

The Chairman appointed the following Nominating Committee: Dr. Donald H. Stubbs, Alexandria, Virginia, Chairman; Dr. Cecil W. Shafer, Little Rock, Arkansas; and Dr. R. F. Bonham, Houston, Texas.

Paper by Dr. Leonard W. Fabian and Dr. Cecil W. Shafer, Little Rock, Arkansas, entitled "An Experimental Evaluation of a New Syncurine Antagonist," was read by Dr. Fabian.

Dr. Thomas S. Griggs, Miami, Florida, read a paper entitled "New Advances in Pediatric Anesthesia" (Lantern Slides), which was discussed by Dr. James B. Cain, Charleston, South Carolina; and in closing by the essayist.

The Section then adjourned until 9:00 a.m. Wednesday.

Wednesday, October 28, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 2, Atlanta, and was called to order by the Chairman, Dr. Ochsner, who presided.

Dr. Henry K. Beecher, Boston, Massachusetts, read a paper entitled "The Practical Evaluation of the Critically Injured Patient" (Lantern Slides), which was discussed by Dr. Perry P. Volpitto, Augusta, Georgia; Dr. Howard S. Phillips, Augusta, Georgia; Dr. Donald H. Stubbs, Alexandria, Virginia; Dr. George H. Berryman, Evanston, Illinois; Dr. Lester Rumble, Atlanta, Georgia; Dr. R. F. Bonham, Houston, Texas; and in closing by the essayist.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. David A. Davis, Chapel Hill, North Carolina.
Vice-Chairman—Dr. Earl F. Weir, Dallas, Texas.
Secretary—Dr. Douglas W. Eastwood,* St. Louis, Missouri.

The Section then adjourned to reconvene in Room 7 for a joint session of the Section on Urology and the Section on Anesthesiology for a Panel Discussion on Anesthesia in Urology, Dr. Perry P. Volpitto, Augusta, Georgia, Moderator.

Participants in the Panel were: representing anesthesia, Dr. F. Gregg Horne, Durham, North Carolina, "Trilene in the Hospital and in the Office" (Lantern Slides); representing anesthesia, Dr. John L. Simmons and Dr. David A. Davis, Chapel Hill, North Carolina, "ACTH and Cortisone in Relation to Anesthesia and Surgery;" representing anesthesia, Dr. Lester Rumble, Jr., Atlanta, Georgia, "Premedication in the Aged Patient;" representing urology, Dr. Samuel L. Raines, Memphis, Tennessee, "Anesthesia in Prostatic Surgery;" representing urology, Dr. Robert Lich, Jr., Louisville, Kentucky; and in closing by the moderator, Dr. Volpitto, "Topical Anesthesia."

Following the Panel Discussion there was a question and answer period.

The joint session was then adjourned *sine die*.

*Dr. Eastwood found he would not be able to serve as Secretary of the Section and gave his resignation to the President, Dr. Alphonse McMahon. Dr. McMahon appointed Dr. Seymour Brown, St. Louis, Missouri.

SECTION ON PUBLIC HEALTH

Officers

Chairman—Dr. J. W. R. Norton, Raleigh, North Carolina.
Vice-Chairman—Dr. Robert W. Ball, Columbia, South Carolina.
Secretary—Dr. Kirk T. Mosley, Oklahoma City, Oklahoma.

Wednesday, October 28, 2:00 p.m.

The Section met at the Municipal Auditorium, Atlanta, Room 3, and was called to order by the Chairman, Dr. J. W. R. Norton, Raleigh, North Carolina, who read his Chairman's Address entitled "The Health Officer as Diagnostician."

Dr. William H. Sebrell, Jr., Bethesda, Maryland, read a paper entitled "Research in the Clinical Center of the National Institutes of Health, Public Health Service" (Lantern Slides), which was discussed by Dr. Theodore J. Bauer, Atlanta, Georgia; Dr. R. L. Simmons, New Orleans, Louisiana; Dr. R. E. Dyer, Atlanta, Georgia; and in closing by the essayist.

Dr. T. Paul Haney, Tulsa, Oklahoma, read a paper entitled "Health Centers in Urban and Rural Public Health Service" (Lantern Slides), which was discussed by Dr. Harry E. Handley, New York, New York; Dr. Ben F. Wyman, Columbia, South Carolina; Dr. Fred E. Brammer, Dania, Florida; Dr. Karl R. Lundeberg, Edgewood, Maryland; Dr. Thomas F. Sellers, Atlanta, Georgia; and in closing by the essayist.

The Chairman appointed the following Nominating Committee: Dr. Thomas F. Sellers, Atlanta, Georgia, Chairman; Dr. C. L. Guyton, Columbia, South Carolina; and Dr. George A. Denison, Birmingham, Alabama.

Dr. Paul V. Lemkau, Baltimore, Maryland, read a paper entitled "Preventive Psychiatry: Its Application to General Practice and by Health Agencies," which was discussed by Dr. J. W. R. Norton, Raleigh, North Carolina; Dr. Carl A. Whitaker, Atlanta, Georgia; Dr. Guy W. Rice, Atlanta, Georgia; Dr. William Kiser, Atlanta, Georgia; Dr. Helen Bellhouse, Atlanta, Georgia; Dr. George F. Reeves, Rockingham, North Carolina; and in closing by the essayist.

Dr. Edward M. Holmes, Jr., Richmond, Virginia, read a paper entitled "Multiphasic Screening: Evaluation as a Tool in Chronic Disease Control," which was discussed by Dr. James F. Hackney, Atlanta, Georgia.

Paper by Dr. Cecil B. Tucker, Mr. W. Hunter Owen and Mr. R. P. Farrell, Nashville, Tennessee, entitled "An Outbreak of Infectious Hepatitis Apparently Transmitted by Water," was read by Dr. Tucker, and was discussed by Dr. A. L. Gray, Jackson, Mississippi; Dr. Thomas F. Sellers, Atlanta, Georgia; Dr. A. D. Langmuir, Atlanta, Georgia; and in closing by the essayist.

The Section then adjourned until 9:00 a.m. Thursday.

Thursday, October 29, 9:00 a.m.

The Section met at the Municipal Auditorium, Room 2, Atlanta, and was called to order by the Chairman, Dr. Norton, who presided.

Dr. Henry Packer, Memphis, Tennessee, read a paper entitled "Family Care Programs in Medical Education," which was discussed by Dr. Robert W. Quinn, Nashville, Tennessee; Dr. Robert L. Simmons, New Orleans, Louisiana; Dr. William Kiser, Atlanta, Georgia; and in closing by the essayist.

Dr. Hardy A. Kemp, Houston, Texas, read a paper entitled "To Teach the Newer Public Health," which was discussed by Dr. George A. Denison, Birmingham, Alabama; Dr. Harry E. Handley, New York, New York; Dr. George B. Dowling, Atlanta, Georgia; Dr. Robert W. Quinn, Nashville, Tennessee; and in closing by the essayist.

Dr. John P. Colmore, Oklahoma City, Oklahoma, read a paper entitled "Comprehensive Medical Care Program at the University of Oklahoma Hospitals" (Lantern Slides), which was discussed by Dr. John H. Venable, Atlanta, Georgia; and in closing by the essayist.

Dr. Robert L. Simmons, New Orleans, Louisiana, read a paper entitled "The Physician's Place in the Development of Health Councils in Local Communities," which was discussed by Dr. John R. Bender, Winston-Salem, North Carolina; and in closing by the essayist.

Dr. Ralph C. Williams, Atlanta, Georgia, read a paper entitled "Coordinated Health Services of Community Hospitals and Health Agencies in Georgia," which was discussed by Dr. Clarence L. Guyton, Columbia, South Carolina; Dr. Thomas F. Sellers, Atlanta, Georgia; Dr. Ben F. Wyman, Columbia, South Carolina; Dr. J. W. R. Norton, Raleigh, North Carolina; and in closing by the essayist.

Dr. Karl R. Lundeberg, Edgewood, Maryland, read a paper entitled "Trends in Military Preventive Medicine" (Lantern Slides), which was discussed by Dr. Thomas M. Page, Atlanta, Georgia; Dr. C. S. Mollohan, Fort McPherson, Georgia; Dr. Walter P. Gardiner, New Orleans, Louisiana; and in closing by the essayist.

The Nominating Committee reported the following nominations for Section officers, the nominees being duly elected by vote of the Section:

Chairman—Dr. Robert W. Ball, Columbia, South Carolina.
Vice-Chairman—Dr. A. L. Gray, Jackson, Mississippi.
Secretary—Dr. Kirk T. Mosley, Oklahoma City, Oklahoma.

The Section then adjourned *sine die*.

SECTION ON MEDICAL EDUCATION AND HOSPITAL TRAINING

Officers

Chairman—Dr. James A. Greene, Houston, Texas.
Vice-Chairman—Dr. William M. McCord, Charleston, South Carolina.
Secretary—Dr. John B. Truslow, Richmond, Virginia.

Due to the Association of American Medical Colleges meeting in Atlantic City at exactly the same time as the Southern Medical Association, and that Association being made up of deans and professors in medical schools, the officers of the Section thought it would not be advisable to attempt a program for the Section this year. This was concurred in by others interested, so there was no program in Atlanta for this Section. The Section will have an interesting program for the meeting next year in St. Louis.

SOUTHERN ELECTROENCEPHALOGRAPHIC SOCIETY

Meeting conjointly with Section on Neurology and Psychiatry of the Southern Medical Association

Officers

President—Dr. Isadore S. Zfass, Richmond, Virginia.
Vice-President—Dr. Samuel C. Little, Birmingham, Alabama.
Secretary-Treasurer—Dr. Don L. Winfield, Memphis, Tennessee.
Chairman, Program Committee—Dr. Peter Kellaway, Houston, Texas.
Council—Dr. James B. Funkhouser, Richmond Virginia; Dr. Peter Kellaway, Houston, Texas; Dr. James W. Ward, Nashville, Tennessee; and Dr. Ephraim Roseman, Louisville, Kentucky.

Wednesday, October 28, 1953

The Society met at the Dinkler-Plaza Hotel, Atlanta, and was called to order by the President, Dr. Isadore S. Zfass, Richmond, Virginia, who presented his President's Address entitled "The Medico-Legal Aspects of Clinical Electroencephalography," and presided over the session.

There was a Panel Discussion on "Technic, Instrumentation, Procedures and Problems in Clinical Electroencephalography," Dr. Samuel C. Little, Birmingham, Alabama, Moderator.

I. Instrumentation

Dr. Curtis Marshall, Baltimore, Maryland, read a paper entitled "The Characteristics of the Electrical Activity of the Human Brain in Normal and Abnormal Conditions."

Dr. Leslie A. Geddes, Houston, Texas, read a paper entitled "The Requirements of Equipment Necessary to Render Faithful Recording of the Human Electroencephalogram."

There was open discussion following these papers.

II. Electrodes: Placement and Array

Dr. Ellen Grass and Dr. Albert Grass, Quincy, Massachusetts, presented a paper entitled "Characteristics of Various Types of Electrodes," which was discussed by Dr. Ephraim Roseman, Louisville, Kentucky.

Dr. Edith Black, Richmond, Virginia, read a paper entitled "Systems of Electrode Placements and Array with Special Reference to the 10-20 System."

Dr. Mercer McAvoy, Birmingham, Alabama, read a paper entitled "Special Runs Useful in the Detection and Localization of Temporal Lobe Lesions."

Dr. Jessie Gartrell, Atlanta, Georgia, read a paper entitled "Special Runs Useful in the Detection and Localization of Parasaggital Lesions."

Dr. Isadore S. Zfass, Richmond, Virginia, read a paper entitled "Special Electrodes: Nasopharyngeal, Tympanic, Etc."

Dr. Peter Kellaway, Houston, Texas, read a paper entitled "Monopolar and Bipolar Recording and Special 'Indifferent' Electrodes: Special Runs."

III. Special Procedures in Routine Clinical Electroencephalography

Dr. Donald S. Bickers, Atlanta, Georgia, read a paper entitled "Sleep," which was discussed by Dr. Rosemary Blanchard, Charlottesville, Virginia.

Dr. Floy Jack Moore, Houston, Texas, read a paper entitled "Metrazol Activation."

Dr. Isadore S. Zfass, Richmond, Virginia, read a paper entitled "Photic Stimulation," which was discussed by Dr. Samuel C. Little, Birmingham, Alabama.

The following officers were elected:

President—Dr. Samuel C. Little, Birmingham, Alabama.
Vice-President—Dr. Peter Kellaway, Houston, Texas.
Secretary-Treasurer—Dr. Don L. Winfield, Memphis, Tennessee.

The Society then adjourned *sine die*.

ASSOCIATION FOR RESEARCH IN OPHTHALMOLOGY

Southern Section

Meeting conjointly with Section on Ophthalmology and Otolaryngology of the Southern Medical Association

Officers

Chairman—Dr. J. Jack Stokes, Atlanta, Georgia.
Vice-Chairman—Dr. Seymour B. Gostin, McKinney, Texas.
Secretary—Dr. A. E. Meisenbach, Jr., Dallas, Texas.

Tuesday, October 27, 7:00 p.m.

The Association for Research in Ophthalmology, Southern Section, met at a joint dinner meeting with the Section on Ophthalmology and Otolaryngology of the Southern Medical Association at the Capitol City Club, Peachtree Room, Atlanta, Dr. Stokes, Chairman, presiding.

The following presentations were made:

Dr. Aeleta N. Barber, New Orleans, Louisiana, read a paper entitled "Unsuspected Neoplasms in Phthisis Bulbi" (Lantern Slides).

Dr. Alston Callahan, Birmingham, Alabama, read a paper entitled "Treatment of Angioneurotic Edema with Intravenous Corticotropin."

Paper by Dr. Robert H. Courtney and Dr. Walter Mayer, Richmond, Virginia, entitled "The Pre-Ocular Fluid" (Lantern Slides), was read by Dr. Mayer.

The following officers were named for the coming year:

Chairman—Dr. Seymour B. Gostin, McKinney, Texas.
Vice-Chairman—Dr. Albert N. LeMoine, Kansas City, Missouri.
Secretary—Dr. Albert E. Meisenbach, Jr., Dallas, Texas.

The Association then adjourned *sine die*.

AMERICAN COLLEGE OF CHEST PHYSICIANS

Southern Chapter

Meeting conjointly with the Southern Medical Association

Officers

President—Dr. Duane Carr, Memphis, Tennessee.
First Vice-President—Dr. John S. Harter, Louisville, Kentucky.
Second Vice-President and Chairman of the Program Committee—Dr. George R. Hodell, Houston, Texas.
Secretary-Treasurer—Dr. Alfred Goldman, St. Louis, Missouri.
Executive Council—Dr. David H. Waterman, Chairman, Knoxville, Tennessee; Dr. M. Jay Flipse, Miami, Florida; Dr. Hollis E. Johnson, Nashville, Tennessee; and Dr. Duane Carr, Memphis, Tennessee.
Atlanta Committee on Arrangements—Dr. Joe S. Cruise, Chairman, and Dr. Carl C. Aven, Associate Chairman.

Sunday, October 25, 9:30 a.m.

The American College of Chest Physicians, Southern Chapter, met at the Henry Grady Hotel, Atlanta, Dr. John H. Seabury, New Orleans, Louisiana, presiding.

Opening remarks were made by President, Dr. Duane Carr, Memphis, Tennessee.

Dr. Bernard P. Wolff, Atlanta, Georgia, read a paper entitled "Respiratory Alkalosis with Especial Reference to Chest Pain."

Paper by Dr. Dean B. Cole and Associates, Richmond, Virginia, entitled "Bronchitis," was read by Dr. Cole.

Paper by Dr. Arthur A. Calix, Dr. Maurice Campagna and Dr. George Hauser, New Orleans, Louisiana, entitled "Additional Observations on the Combined Use of Aldinamide with Isonicotinic Acid Hydrazide in Far Advanced Pulmonary Tuberculosis" (Lantern Slides), was read by Dr. Calix.

Dr. Foster Hampton, Jr., Chattanooga, Tennessee, read a paper entitled "Nonsurgical Treatment of Carcinoma of the Esophagus."

Sunday, October 25, 12:00 noon

There was a luncheon meeting of the Regents, Governors and College Chapter Officials, Dr. Alvis E. Greer, Houston, Texas, President, American College of Chest Physicians, presiding.

Sunday, October 25, 2:00 p.m.

The American College of Chest Physicians, Southern Chapter, met at the Henry Grady Hotel, Atlanta, Dr. Joe S. Cruise, Atlanta, Georgia, presiding.

Dr. Thomas B. Haltom, Nashville, Tennessee, read a paper entitled "The Differential Diagnosis of Reinfection Pulmonary Tuberculosis from Other Pulmonary Infections" (Lantern Slides).

Paper by Dr. J. Winthrop Peabody, Jr., Oteen, North Carolina, Dr. John H. Seabury and Dr. Howard A. Buechner, New Orleans, Louisiana, entitled "Pulmonary Manifestations of Nocardiosis" (Lantern Slides), was read by Dr. Peabody.

Dr. Frederick H. Aves, Houston, Texas, read a paper entitled "Lipoid Pneumonia" (Lantern Slides).

A social hour was held at the Henry Grady Hotel, followed by the President's Banquet at 7:30 p.m. An X-Ray Conference, R. Kyle Brown, Greenville, South Carolina, Moderator, concluded the evening program.

Monday, October 26, 9:00 a.m.

The American College of Chest Physicians, Southern Chapter, met at the Henry Grady Hotel, Atlanta, Dr. George R. Hodell, Houston, Texas, presiding.

Paper by Dr. Martin M. Cummings, Washington, D. C., Dr. Margaret C. Drummond, Atlanta, Georgia, Dr. Paul C. Hudgins, Washington, D. C., and Dr. Walter L. Bloom, Atlanta, Georgia, entitled "Chemical Tissue Factors Which May Be Related to Host Resistance to Tuberculosis" (Lantern Slides), was read by Dr. Cummings.

Dr. Daniel E. Jenkins, Jr., Houston, Texas, read a paper entitled "Some Observations on the Continuous Administration of Various Drug Combinations in Excess of One Year in the Treatment of Advanced Pulmonary Tuberculosis" (Lantern Slides).

Dr. Andrew L. Banyai, Milwaukee, Wisconsin, read a paper entitled "Differential Diagnosis and Treatment of Pulmonary Hemorrhage" (Lantern Slides).

Dr. George N. J. Sommer, Jr., Trenton, New Jersey, read a paper entitled "The Treatment of Tuberculosis in the Mentally Ill" (Lantern Slides).

Monday, October 26, 12:00 noon

At a luncheon meeting at the Henry Grady Hotel, Atlanta, Dr. Duane Carr, Memphis, Tennessee, President, Southern Chapter, presiding, an address was given by Dr. Thomas J. E. O'Neill, Philadelphia, Pennsylvania, entitled "The Surgery of Stenotic Valvular Diseases, Indications and Results" (Lantern Slides and Scientific Exhibit).

At a business meeting, which concluded the program, the following officers were elected:

President—Dr. John S. Harter, Louisville, Kentucky.
First Vice-President—Dr. George R. Hodell, Houston, Texas.
Second Vice-President and Chairman of Program Committee—Dr. Alfred Goldman, St. Louis, Missouri.
Secretary-Treasurer—Dr. Joe S. Cruise, Atlanta, Georgia.

The Southern Chapter then adjourned *sine die*.

GEORGIA PEDIATRIC SOCIETY

Meeting conjointly with the Section on Pediatrics of the Southern Medical Association

Officers

President—Dr. Harold W. Muecke, Waycross, Georgia.
President-Elect—Dr. Charles Boswell, Macon, Georgia.
Vice-President—Dr. Irvin Willingham, Atlanta, Georgia.
Secretary-Treasurer—Dr. J. Harry Lange, Atlanta, Georgia.

Thursday, October 29, 9:00 a.m.

The Georgia Pediatric Society met conjointly with the Section on Pediatrics at the Municipal Auditorium, Room 5, Atlanta, and was called to order by the Chairman of the Section, Dr. Preston A. McLendon, Washington, D. C. Dr. Harold W. Muecke, Waycross, Georgia, President of the Society, presided.

Dr. Wallace Sako, New Orleans, Louisiana, read a paper entitled "Management of Respiratory Infection Without Fever" (Lantern Slides).

Dr. Edith M. Lincoln, New York, New York, read a paper entitled "Early Diagnosis of Tuberculosis in Children" (Lantern Slides).

Dr. Willis J. Potts, Chicago, Illinois, read a paper entitled "Congenital Anomalies of the Gastrointestinal Tract" (Lantern Slides).

The joint meeting then adjourned, the Society to reconvene at 12:30 p.m.

Thursday, October 29, 12:30 p.m.

The Society met at a luncheon meeting at the Mayfair Club, Atlanta, Dr. Harold W. Muecke, Waycross, Georgia, President, presiding.

Dr. Wallace Sako, New Orleans, Louisiana, read a paper entitled "Partial Thyroid Hypofunction in Infancy and Childhood" (Lantern Slides).

Dr. Edith M. Lincoln, New York, New York, read a paper entitled "Specific Treatment of Tuberculosis in Children" (Lantern Slides).

Dr. Willis J. Potts, Chicago, Illinois, read a paper entitled "Common Surgical Problems in Infancy" (Lantern Slides).

The luncheon meeting then adjourned *sine die*.

SOUTHERN GYNECOLOGICAL AND OBSTETRICAL SOCIETY

Meeting conjointly with the Southern Medical Association

Officers

President—Dr. W. Z. Bradford, Charlotte, North Carolina.
President-Elect—Dr. W. O. Johnson, Louisville, Kentucky.
Secretary-Treasurer—Dr. W. C. Winn, Richmond, Virginia.

Monday, October 26, 9:30 a.m.

The Southern Gynecological and Obstetrical Society met at the Dinkler-Plaza Hotel, Civic Room, Atlanta, and was called to order by the President, Dr. W. Z. Bradford, who presided.

There was a Panel Discussion of Obstetrical Problems, Dr. H. Hudnall Ware, Jr., Richmond, Virginia, Moderator: "Present Day Trends in Cesarean Section," discussed by Dr. W. Norman Thornton, Jr., Charlottesville, Virginia, and Dr. Seward H. Wills, Houston, Texas; and "Hemorrhage in Third Trimester of Pregnancy," discussed by Dr. John E. Savage, Baltimore, Maryland, and Dr. Frank R. Lock, Winston-Salem, North Carolina.

There was a Panel Discussion of Gynecological Problems, Dr. Robert A. Ross, Chapel Hill, North Carolina, Moderator: "Uterine Malignancy," discussed by Dr. Leo J. Hartnett, St. Louis, Missouri, and "Carcinoma of the Cervix," discussed by Dr. John A. Wall, Houston, Texas.

A social hour was held at 6:30 p.m. at the Dinkler-Plaza Hotel, Dinkler Room, followed by a dinner at 7:30 p.m. with Dr. W. Z. Bradford, President, presiding. Dr. Robert A. Ross, Chapel Hill, North Carolina, gave an address entitled "The Growth of a Specialty."

Tuesday, October 27, 8:00 a.m.

The Society held its annual business meeting at a breakfast at the Dinkler-Plaza Hotel, Ansley Room, Atlanta, and the following officers were elected:

President-Elect—Dr. Charles J. Collins, Orlando, Florida.
Secretary-Treasurer—Dr. Leo J. Hartnett, St. Louis, Missouri.

Dr. W. O. Johnson, Louisville, Kentucky, was installed President for the coming year.

The Society then adjourned *sine die*.

SOUTHERN SOCIETY OF CANCER CYTOLOGY

Meeting conjointly with Southern Medical Association

Officers

President—Dr. F. Bayard Carter, Durham, North Carolina.
Vice-President—Dr. M. Y. Dabney, Birmingham, Alabama.
Secretary—Dr. J. Ernest Ayre, Miami, Florida.
Treasurer—Dr. J. K. Cline, Birmingham, Alabama.
Program Chairman—Dr. H. E. Nieburgs, Augusta, Georgia.

Monday, October 26, 9:00 a.m.

The Society met at the Municipal Auditorium, Room 6, Atlanta, Dr. Carter, President, presiding.

Dr. B. C. Hopman, Miami, Florida, read a paper entitled "Cytochemical Observations Relating to Nucleo Cytoplasmic Imbalance in Cancer Cells" (Lantern Slides).

Dr. Sam Wesley Denham, Jacksonville, Florida, read a paper entitled "The Cytochemistry of Intra-Ephithelial Carcinoma in Pregnancy" (Lantern Slides).

Dr. James W. Reagan, Cleveland, Ohio, read a paper entitled "A Study of Isolated Cells Derived from Dysplasia and Carcinoma *in Situ* of the Uterine Cervix" (Lantern Slides).

The discussion on papers of Drs. Hopman, Denham and Reagan was opened by Dr. Darrell Ayer, Atlanta, Georgia.

Dr. A. E. Rakoff, Philadelphia, Pennsylvania, read a paper entitled "The Use of Vaginal Smears in the Diagnosis of Functional Disorders of the Female Reproductive System" (Lantern Slides).

Paper of Dr. H. E. Nieburgs, Augusta, Georgia, in cooperation with all members of the Floyd County Medical Society and Dr. T. G. Peacock, Milledgeville, Georgia, entitled "The Routine Use of Exfoliative Cytology for General Population Screening" (Lantern Slides), was read by Dr. Nieburgs.

Paper of Dr. Dudley Jackson and Dr. David A. Todd, San Antonio, Texas, entitled "Cytology of Breast Secretion and Its Significance" (Lantern Slides), was read by Dr. Jackson.

The discussion on paper of Drs. Nieburgs and Peacock and the paper of Drs. Jackson and Todd was opened by Dr. Cyrus C. Erickson, Memphis, Tennessee.

Paper by Dr. Joe M. Blumberg, Washington, D. C., and Dr. N. B. Baroody, Charleston, South Carolina, entitled "Abrasive Balloon Detection of Gastric Cancer" (Lantern Slides), was read by Dr. Blumberg.

Paper by Dr. J. Ernest Ayre and Dr. Benjamin G. Oren, Miami, Florida, entitled "A New Rapid Method of Collecting Gastric Cells for Cytology Diagnosis Using a Rotating Stomach Brush" (Lantern Slides and Scientific Exhibit), was read by Dr. Ayre.

Paper by Dr. David C. Williams, Jr., and Dr. H. E. Nieburgs, Augusta, Georgia, entitled "Cytology of the Prostate and Changes Following Hormone Therapy" (Lantern Slides), was read by Dr. Williams.

The discussion on papers of Drs. Blumberg and Baroody, Drs. Ayre and Oren, and Drs. Williams and Nieburgs was opened by Dr. S. A. Gunn, Miami, Florida.

Dr. C. G. Grand, Miami, Florida, read a paper entitled "Further Studies of Precancerous Lesions and Carcinoma *in Situ* Grown *in Vitro*" (Lantern Slides).

The following officers were named for the coming year:

President—Dr. F. Bayard Carter, Durham, North Carolina.
President-Elect—Dr. H. Hudnall Ware, Jr., Richmond, Virginia.
First Vice-President—Dr. M. Y. Dabney, Birmingham, Alabama.
Second Vice-President—Dr. C. C. Erickson, Memphis, Tennessee.
Secretary—Dr. J. Ernest Ayre, Miami, Florida.
Treasurer—Dr. Joseph K. Cline, Birmingham, Alabama.
Chairman of Program Committee—Dr. Lois I. Platt, Washington, D. C.

The Society then adjourned *sine die*.

WOMAN'S AUXILIARY TO THE SOUTHERN MEDICAL ASSOCIATION

Officers

President—Mrs. Richard F. Stover, Miami, Florida.
President-Elect—Mrs. Stanley A. Hill, Corinth, Mississippi.
First Vice-President—Mrs. Lehman W. Williams, Savannah, Georgia.
Second Vice-President—Mrs. Fred W. Horn, Dallas, Texas.
Third Vice-President—Mrs. Edward R. Hipp, Charlotte, North Carolina.
Recording Secretary—Mrs. Louis K. Hundley, Pine Bluff, Arkansas.
Corresponding Secretary—Mrs. Nelson Murray, Jacksonville, Florida.
Treasurer—Mrs. John J. O'Connell, St. Louis County, Missouri.
Historian—Mrs. Maynard R. Emlaw, Richmond, Virginia.
Parliamentarian—Mrs. Robert F. Thompson, El Paso, Texas.
Standing Committees—
Budget—Mrs. Harvey F. Garrison, Jackson, Mississippi.
Custodian of Records—Mrs. W. W. Potter, Knoxville, Tennessee.
Doctor's Day—Mrs. Alfred F. Burnside, Columbia, South Carolina.
Jane Todd Crawford Memorial—Mrs. Perry Melvin, Miami, Florida.
Membership—Mrs. Lehman W. Williams, Savannah, Georgia.
Necrology—Mrs. John F. McCuskey, Clarksburg, West Virginia.
Program—Mrs. Olin S. Cofer, Atlanta, Georgia.
Publicity—Mrs. J. O. Morgan, Gadsden, Alabama.
Nominating—Mrs. E. M. Dunstan, Decatur, Georgia.
Resolutions—Mrs. John W. Turner, Atlanta, Georgia.
Research and Romance of Medicine—Mrs. Thomas E. Strain, Shreveport, Louisiana.
Auditing—Mrs. Joseph W. Kelso, Oklahoma City, Oklahoma.
Special History—Mrs. A. T. McCormack, Louisville, Kentucky.

The twenty-ninth annual meeting of the Woman's Auxiliary to the Southern Medical Association was held in Atlanta, October 26-29, with the Henry Grady Hotel as headquarters.

Monday, October 26, 2:30 p.m.

The Executive Board met at the Henry Grady Hotel, Variety Room, Atlanta, Georgia, Mrs. Richard F. Stover, President, presiding. Thirty-five members were present.

Mrs. Stover, President, gave the invocation.

It was moved and carried that cards be sent to all past presidents who were unable to attend because of illness or death in their immediate families.

Mrs. Stanley A. Hill, Corinth, Mississippi, was appointed to send the above messages in the absence of the corresponding secretary, and to also send a message expressing the good wishes of the Auxiliary to Mrs. V. Eugene Holcombe, a surgical patient at Jefferson Hospital, Philadelphia, Pennsylvania.

Minutes of the post convention Executive Board meeting of November 1952 were read and approved.

Mrs. Shelley C. Davis, Atlanta, Georgia, was appointed parliamentarian by the President, Mrs. Stover, in the absence of Mrs. Robert F. Thompson, El Paso, Texas.

Mrs. John J. O'Connell, treasurer, St. Louis, Missouri, gave the following report: Receipts $1,247.98, disbursements $981.65, balance on hand November 26, 1953, $266.33. Jane Todd Crawford Scholarship Loan Fund: United States bonds (present value) $2,366.14. Cash on hand December 1, 1953, $1,171.63, receipts $373.44, total cash on hand October 26, 1953, $1,545.07. It was moved and carried the report be accepted and that the reading of a detailed accounting be dispensed with but would go to the Auditing Committee.

The President, Mrs. Stover, referred the Treasurer's Report to the Auditing Committee composed of Mrs. Joseph W. Kelso, Oklahoma City, Oklahoma, Chairman; Mrs. Charles P. Corn, Greenville, South Carolina; and Mrs. Robert C. Haynes, Marshall, Missouri.

Mrs. Maynard R. Emlaw, Richmond, Virginia, historian, distributed mimeographed reports of officers and committee chairmen.

Mrs. Harvey F. Garrison, Jackson, Mississippi, Chairman, Budget Committee, reported for the Committee: Contingent Fund from 1952-1953 $50.00, from Southern Medical Association $1,500.00, total $1,550.00. Budget for 1953-1954: President's Expense Fund $100.00, President-Elect's Expense Fund $25.00, Travel Fund $950.00, Doctor's Day Committee $20.00, Doctor's Day Prizes $25.00, Jane Todd Crawford (continued study) $20.00, Research and Romance of Medicine (revision of files) $20.00, Memorial (booklets for year) $15.00, stationery and supplies $100.00; Past-President's pin $15.00, Annual Meeting $100.00, Special History Committee $25.00, Contingent Fund $50.00, miscellaneous $85.00, total $1,550.00. The budget was recommended to the General Session for approval.

The President, Mrs. Stover, introduced Mrs. Leo J. Schaefer, Salina, Kansas, President, Woman's Auxiliary to the American Medical Association, as a distinguished guest.

A Report on the Special History was given by Mrs. A. T. McCormack, Louisville, Kentucky, Chairman. A rising vote of thanks was given Mrs. McCormack for her outstanding contribution to the Auxiliary.

Mrs. E. A. Bancker, Atlanta, Georgia, General Chairman of the Ladies Entertainment Committee, was introduced and extended a cordial invitation to the members to attend the various functions planned for their entertainment.

The President announced she was providing the Rev. John McSween, D.D., Clinton, South Carolina, as guest speaker for Doctor's Day luncheon in lieu of gifts to individual members of Executive Board.

Mrs. Alfred F. Burnside, Columbia, South Carolina, Chairman, Committee on Doctor's Day, gave a report and urged full attendance at the luncheon.

Mrs. Perry Melvin, Miami, Florida, Chairman, Jane Todd Crawford Memorial Committee, gave a report on the study of loans and scholarships for students in schools of medicine and nursing. Motion was made and carried that the Board recommend to the General Session that this study be continued during the next year. Attention was called to the fact that the title Jane Todd Crawford Memorial Scholarship Loan Fund was a misnomer in that the word Scholarship implies an outright gift rather than a loan.

Motion was made and carried that the Board recommend to the General Session that notes for loans from the Jane Todd Crawford Fund, together with monies and bonds, be held by the treasurer.

Mrs. L. K. Elmer, Atlanta, page for the session, was introduced.

The President, Mrs. Stover, announced that the Chairman of the Necrology Committee, Mrs. John F. McCuskey, Clarksburg, West Virginia, now had a book to permanently record the names of deceased members. The State Councilors have been provided with cards of condolence to be sent to families of deceased members.

The President, Mrs. Stover, announced that the Vice-Presidents are the Membership Committee to promote membership in the Southern Medical Association and to urge attendance at annual meetings.

The President announced the appointment of the following special committees: *Courtesy Resolutions*—Mrs. Maynard R. Emlaw, Chairman, Richmond, Virginia; Mrs. Charles L. Goodhand, Parkersburg, West Virginia; and Mrs. David A. Wilson, Greenville, South Carolina. *Doctor's Day Awards*—Mrs. W. G. Thuss, Sr., Chairman, Birmingham, Alabama; Mrs. Edwin A. Socola, New Orleans, Louisiana; Mrs. David Woolfolk Barrow, Lexington, Kentucky; Mrs. H. David Hickey, Chattanooga, Tennessee; and Mrs. Joseph A. Elliott, Charlotte, North Carolina. *Reading*—Mrs. L. S. Thompson, Chairman, Dallas, Texas; Mrs. S. L. Bailey, Kosciusko, Mississippi; and Mrs. Leo Smith, Waycross, Georgia.

Mrs. Thomas E. Strain, Chairman, Committee on Research and Romance of Medicine, reported on work done on these files. It was moved and carried that the Board recommend to the General Session that the incoming President appoint a committee to study these files and make recommendations at the next annual meeting as to the type of material desired and acceptable.

The Secretary was instructed by the President to read a communication from Mrs. Stanley A. Hill, President-Elect, tendering her resignation for medical reasons.

Mrs. Robert C. Haynes, Marshall, Missouri, requested information as to progress in marking the Auxiliary's gifts to the Ephriam McDowell Home at Danville, Kentucky. The President requested Mrs. A. T. McCormack to look into this matter.

The meeting then adjourned.

Tuesday, October 27, 10:00 a.m.

The Auxiliary met in the Henry Grady Hotel, Dixie Ball Room, Atlanta, and was called to order by the President, Mrs. Richard F. Stover, Miami, Florida, who presided.

Rev. Wilson W. Sneed, Rector of St. Luke's Episcopal Church, Atlanta, gave the invocation.

Mrs. W. G. Elliott, Cuthbert, Georgia, extended a gracious welcome to the Auxiliary for its meeting in Georgia. Mrs. J. C. Davis, Quincy, Florida, responded on behalf of the Auxiliary.

Mrs. Marion C. Pruitt, Atlanta, Chairman of Pages, presented the pages for the meeting.

Thirty-six members of the Executive Board were recognized as the Secretary called the roll.

The President, Mrs. Stover, introduced Mrs. Leo J. Schaefer, Salina, Kansas, President, Woman's Auxiliary to the American Medical Association, as a distinguished guest.

Mrs. E. A. Bancker, Atlanta, Georgia, General Chairman of the Ladies Entertainment Committee, was introduced. She presented the Chairmen of her Committees: Courtesy, Mrs. A. Hamblin Letton; Decorations, Mrs. C. W. Strickler, Jr.; Doctor's Day Luncheon, Mrs. E. M. Dunstan and Mrs. William G. Hamm; Exhibit, Mrs. Walker L. Curtis; Favors, Mrs. Guy H. Adams; Meeting Arrangements, Mrs. Frank K. Boland, Jr.; Pages, Mrs. Marion C. Pruitt; Program, Mrs. Olin S. Cofer; Publicity, Mrs. William R. Crowe; Registration, Mrs. Allen H. Bunce and Mrs. Dick R. Longino; Research and Romance of Medicine Tea, Mrs. Charles E. Rieser and Mrs. John W. Turner; Telephone, Mrs. John R. McCain; and Transportation, Mrs. Shelley C. Davis.

It was moved and carried to dispense with the reading of the minutes of the twenty-eighth annual meeting (Miami) and to approve them as printed in the SOUTHERN MEDICAL JOURNAL for May 1953.

Mrs. Shelley C. Davis, Atlanta, Georgia, parliamentarian for the annual meeting, was introduced. Mrs. Davis read the rules of order for the meeting, which were adopted.

Dr. Fred E. Woodson, Tulsa, Oklahoma, Chairman of the Council and of the Advisory Committee for the Auxiliary, was introduced. Mrs. Stover paid tribute to the unceasing interest of Dr. Woodson in the welfare of the Auxiliary and his patient counseling throughout her administration. Dr. Woodson gave a brief address stressing Mrs. Stover's strengthening of the bonds of friendship among doctors and their wives throughout the South. He announced the Council, as a token of appreciation of Mrs. Stover's work, had approved an additional $500.00 to the Auxiliary to go to Mrs. Stover to partially reimburse her for her traveling expenses in attending state meetings in 1953.

Dr. Walter C. Jones, Miami, Florida, President of the Southern Medical Association, spoke. He mentioned that the Auxiliary is a great asset to the Association, and paid especial tribute to the President's work in the field of promoting friendship.

The reports of State Councilors were read by regions.

The recommendations of the Executive Board were read and approved.

Presidents and Presidents-Elect of state auxiliaries were introduced as special guests.

A memorial service was conducted by the President, Mrs. Stover, in the absence of Mrs. John F. McCuskey, Necrology Chairman.

The meeting then adjourned.

Tuesday, October 27, 4:00 p.m.

The Woman's Auxiliary to the Southern Medical Association were guests of Rich's Department Store, Atlanta, at a Research and Romance of Medicine Tea, three hundred and fifty members being present.

Mrs. Thomas E. Strain, Shreveport, Louisiana, Chairman, Committee on Research and Romance of Medicine, presided and introduced guests at speaker's table.

Mr. Richard H. Rich of Rich's Department Store extended a very gracious welcome.

Mrs. Richard F. Stover, President of the Auxiliary, introduced the guest speaker, Dr. Frank G. Slaughter, Jacksonville, Florida, who gave a talk entitled "The Physician's Heritage."

The meeting then adjourned.

Wednesday, October 28, 9:30 a.m.

The Auxiliary met at the Henry Grady Hotel, Dixie Ballroom, Atlanta, and was called to order by the President, Mrs. Richard F. Stover, Miami, Florida, who presided.

Mrs. James N. Brawner, Sr., Atlanta, a Past President, gave the invocation.

Mrs. Louis K. Hundley, recording secretary, read the minutes of the first General Session, which were approved.

Mrs. Walker L. Curtis, Atlanta, Chairman of the Exhibit Committee, was introduced and the President urged members to attend the Auxiliary exhibit at the Auditorium.

Mrs. Harvey F. Garrison, Jackson, Mississippi, Chairman of the Budget Committee, submitted the budget recommended by the Executive Board. It was moved and carried that the budget be adopted.

Mrs. John J. O'Connell, treasurer, St. Louis, Missouri, read her report as presented to the Executive Board. The report and recommendation of Executive Board were approved. It was moved that $15.00 be given Mrs. Stover for the purchase of a Past President's pin. It was moved and carried that the treasurer each year order the Past President's pin.

Mrs. John W. Turner, Atlanta, expressed the appreciation of the Auxiliary for Mrs. Stover's outstanding administration and her achievements in furthering the Auxiliary's aims. Mrs. Stover responded and gave a brief summary of her year's work.

Mrs. Joseph W. Kelso, Oklahoma City, Oklahoma, Chairman of the Auditing Committee, reported the treasurer's books and report in order. It was moved and carried that the matured bonds in the Jane Todd Crawford Scholarship Loan Fund be left to draw interest.

Mrs. Leo J. Schaefer, Salina, Kansas, President of the Woman's Auxiliary to the American Medical Association, was introduced and discussed new areas of interest in the national program. Mrs. Schaefer paid a tribute to the Woman's Auxiliary to the Southern Medical Association, emphasizing that Doctor's Day, Jane Todd Crawford Scholarship Loan Fund, and the Research and Romance of Medicine Project, contributed much to the public relations program of the Auxiliary. She emphasized that the Woman's Auxiliary to the Southern Medical Association and the Woman's Auxiliary to the American Medical Association complement each other.

Mrs. J. C. Davis, Quincy, Florida, presented a beautiful gift of silver to Mrs. Stover on behalf of the members of the Woman's Auxiliary to the Florida State Medical Association of which Mrs. Stover is President-Elect.

Mrs. Maynard R. Emlaw, Richmond, Virginia, Chairman of the Committee on Courtesy Resolutions, presented the report of her committee which was approved.

Mrs. Allen H. Bunce, Atlanta, Chairman, Registration Committee, reported 487 members and guests registered.

Mrs. E. M. Dunstan, Atlanta, Chairman of the Nominating Committee, presented the following report:

President—Mrs. George D. Feldner, New Orleans, Louisiana.
President-Elect—Mrs. Louis K. Hundley, Pine Bluff, Arkansas.
First Vice-President—Mrs. Alfred F. Burnside, Columbia, South Carolina.
Second Vice-President—Mrs. J. R. Horn, Jr., Bessemer, Alabama.
Third Vice-President—Mrs. Maynard R. Emlaw, Richmond, Virginia.
Recording Secretary—Mrs. Walker L. Curtis, Atlanta, Georgia.
Treasurer—Mrs. John F. McCuskey, Clarksburg, West Virginia.
Historian—Mrs. R. T. Travis, Jacksonville, Texas.

It was moved and carried that the Report of the Nominating Committee be adopted. There being no nominations from the floor the nominees were elected by acclamation.

Mrs. Olin S. Cofer, Atlanta, Past President, Woman's Auxiliary to the Southern Medical Association, installed the new officers, and presented the Past President's pin to Mrs. Richard F. Stover, retiring President.

Mrs. Richard F. Stover, retiring President, presented the president's pin and gavel to the incoming President, Mrs. George D. Feldner, New Orleans, Louisiana, who made a brief address.

The President, Mrs. Feldner, announced the appointment of Mrs. C. Grenes Cole, New Orleans, Louisiana, to be corresponding secretary, and Mrs. Arthur A. Herold, Shreveport, Louisiana, to be parliamentarian.

The meeting then adjourned.

Wednesday, October 28, 12:15 p.m.

The Doctor's Day Luncheon was held at the Atlanta Athletic Club, Atlanta.

Mrs. Alfred F. Burnside, Columbia, South Carolina, Chairman of Doctor's Day, presided.

Mrs. Richard F. Stover, Miami, Florida, presented the honored guests, which included Dr. W. L. Pressly, Due West, South Carolina, and Dr. J. M. Travis, Jacksonville, Texas, selected by the American Medical Association as General Practitioner of the Year for 1948 and 1952, respectively. Mr. C. P. Loranz, Secretary and General Manager of the Southern Medical Association, was introduced and the President paid tribute to his contributions to Southern medicine during his many years as the Executive Officer of the Association.

Announcement of awards to various auxiliaries for their Doctor's Day programs was made by Mrs. W. G. Thuss, Sr., Birmingham, Alabama.

Dr. Walter C. Jones, Miami, Florida, President of the Southern Medical Association, introduced the guest speaker, Rev. John McSween, D.D., Clinton, South Carolina, who gave an address entitled "A Prescription for Living in These Times."

The luncheon meeting then adjourned.

Council, Woman's Auxiliary to the Southern Medical Association
(All Are Members of the Executive Board)

Expire 1954—
Kentucky—Mrs. Lanier Lukins, Louisville.
Mississippi—Mrs. William H. Anderson, Booneville.
Missouri—Mrs. Harry M. Gilkey, Kansas City.
Oklahoma—Mrs. John C. Perry, Tulsa.
South Carolina—Mrs. Karby D. Shealy, Columbia.
Tennessee—Mrs. Park Nicely, Knoxville.
Texas—Mrs. O. W. Robinson, Paris.
Virginia—Mrs. Herman W. Farber, Petersburg.
West Virginia—Mrs. Lynwood D. Zinn, Clarksburg.

Expire 1955—
Alabama—Mrs. W. G. Thuss, Sr., Birmingham.
Arkansas—Mrs. Hoyt Choate, Little Rock.
District of Columbia—Mrs. Oscar B. Hunter, Jr., Washington.
Florida—Mrs. Lee Rogers, Jr., Rockledge.
Georgia—Mrs. W. P. Stoner, Sylvester.
Louisiana—Mrs. Roy Carl Young, Covington.
Maryland—Mrs. T. A. Christensen, College Park.
North Carolina—Mrs. Harry Johnson, Elkin.

Living Past Presidents, Woman's Auxiliary to the Southern Medical Association
(All Are Members of the Executive Board)

1925, Mrs. E. H. Cary, Dallas, Texas.
1927, Mrs. Oscar M. Marchman, Dallas, Texas.
1928, Mrs. Arthur T. McCormack, Louisville, Kentucky.
1929, Mrs. C. W. Garrison, Little Rock, Arkansas.
1930, Mrs. James N. Brawner, Sr., Atlanta, Georgia.
1931, Mrs. S. A. Collom, Sr., Texarkana, Arkansas.
1932, Mrs. Charles E. Oates, Little Rock, Arkansas.
1933, Mrs. Arthur A. Herold, Shreveport, Louisiana.
1936, Mrs. Oliver W. Hill, Sr., Knoxville, Tennessee.
1937, Mrs. Frank N. Haggard, San Antonio, Texas.
1938, Mrs. Luther Bach, Florence, Kentucky.
1939, Mrs. W. K. West, Oklahoma City, Oklahoma.
1940, Mrs. Charles P. Corn, Greenville, South Carolina.
1941, Mrs. M. Pinson Neal, Columbia, Missouri.
1942, Mrs. J. Ullman Reaves, Mobile, Alabama.
1943, Mrs. Richard H. Clark, Hattiesburg, Mississippi.
1944-45, Mrs. John Pierpont Helmick, Fairmont, West Virginia.
1946, Mrs. W. W. Potter, Knoxville, Tennessee.
1947, Mrs. Wiley R. Buffington, New Orleans, Louisiana.
1948, Mrs. Olin S. Cofer, Atlanta, Georgia.
1949, Mrs. Joseph W. Kelso, Oklahoma City, Oklahoma.
1950, Mrs. Robert C. Haynes, Marshall, Missouri.
1951, Mrs. L. S. Thompson, Dallas, Texas.
1952, Mrs. V. Eugene Holcombe, Charleston, West Virginia.
1953, Mrs. Richard F. Stover, Miami, Florida.

Advisory Committee

The Advisory Committee to the Woman's Auxiliary is the Executive Committee of the Council of the Southern Medical Association: Dr. Olin S. Cofer, Chairman, Atlanta, Georgia; Dr. Milford O. Rouse, Vice-Chairman, Dallas, Texas; Dr. J. Morris Reese, Baltimore, Maryland; and ex-officio members, Dr. Alphonse McMahon, President, St. Louis, Missouri; Dr. R. L. Sanders, President-Elect, Memphis, Tennessee; and Dr. W. Raymond McKenzie, First Vice-President, Baltimore, Maryland.

Statement by C. P. Loranz*

FORTY YEARS OF SERVICE

When I left the office last night I had completed forty years of service with the Southern Medical Association. On October 7, 1912, I became associated with Dr. Seale Harris in the work

*Minutes of Miami meeting, November, 1952. SOUTHERN MEDICAL JOURNAL, volume 46, number 10, October 1953, page 1038.

of the Southern Medical Association and the Southern Medical Journal, being employed by Dr. Harris to assist him in the work. The Southern Medical Journal, official organ of the Southern Medical Association, was then privately owned by a small group of physicians. I carried the title of Business Manager of both the Southern Medical Association and the Southern Medical Journal.

During this forty year period the Association has failed only once to hold an annual meeting, that was in 1918, the year of the influenza pandemic. The Association was to have met in Asheville, North Carolina, but that city like most others throughout the country did not permit gatherings of any kind. So in this forty years the Association has held thirty-nine annual meetings and I have attended and had some part in all of them.

At the annual meeting of the Association in November 1921 Dr. Seale Harris resigned as Secretary and Treasurer of the Southern Medical Association and Editor of the Southern Medical Journal due to the press of his private practice. At that time I was elected Secretary, Treasurer and Business Manager, carrying the title of Secretary-Manager, and Dr. M. Y. Dabney, then Associate Editor of the Journal, was elected Editor. A few years later, in revising the Constitution and By-Laws, the Association provided for the office of General Manager and I then became Secretary, Treasurer and General Manager, continuing to carry the title of Secretary-Manager. So, for many years I have served the Association in the triple capacity of Secretary, Treasurer and General Manager.

I have seen the membership of the Association grow from a few hundred to a few thousand. I have seen the attendance of physicians at the annual meetings grow from less than three hundred to almost three thousand at some of the annual meetings. I have seen the scientific activities of the Association increase from four sections to twenty-one sections, all with programs unsurpassed in scientific excellence by any medical organization. I have seen the scientific exhibits grow from none to almost one hundred at some annual meetings. I have seen the technical exhibits, sometimes called commercial exhibits, a source of revenue in financing the Association, increase from half a dozen to almost one hundred at some of the annual meetings.

When I began my service with the Southern Medical Association there were a relatively few influential physicians active in the organization in comparison with the large number today. As is always the case with a new organization, the expenses were greater than the revenue in several of the early years. But for the faith and wisdom of Dr. Seale Harris and a few other loyal friends who gave liberally of their time and influence and made available through loans their personal funds, we could not have weathered that critical period. I have seen the Association weather other critical periods, notable two World Wars, with hundreds of our members in service; and two so-called depressions.

At the annual meeting in November 1921, when I became the Executive Officer, the Association acquired the Southern Medical Journal by purchase as per the terms of a contract made in November 1911, assuming an obligation of fifty-five thousand dollars to be paid in ten annual installments. The net worth of the Association, its assets, was then less than one thousand dollars. I have seen that debt paid and the Association build up an ample liquid reserve (U. S. Government Bonds) and carry a creditable daily bank balance. The net worth of the Association, its assets, is now more than one hundred and seventy-five thousand dollars.

I have seen the Association progress from a comparatively obscure organization with a few loyal followers, to an organization nationally and internationally known and respected and with a host of loyal followers. I have seen its Journal, the Southern Medical Journal, progress from a fairly obscure publication to one that is recognized nationally and internationally as one of the best in a group of worthwhile publications for physicians.

The Southern Medical Association would not have the place it has today had it not been for the interest, loyal cooperation and fine leadership given it by the physicians of the South. I could not have accomplished anything during these years without that interest, loyal cooperation and fine leadership. All that I am willing to say for myself is that over the years I have tried to be efficient, faithful, fair and just, and I have been conscientious.

I have always felt that the work I was trying to do is worthwhile, that the Southern Medical Association is a worthwhile organization with a mission to perform in and for the South. It has always been my intention to make my work count for something in the advancement of the Southern Medical Association and thereby in the advancement of organized medicine in the South.

As I begin today a new year of service, the first day of a forty-first year, I pledge anew to the Southern Medical Association the best there is in me for such a period of time as the Association may desire my services. It has always been my purpose to give my best. I shall continue to try to be efficient, faithful, fair and just, and I will be conscientious. I covet the confidence, the esteem and the approbation of those I am privileged to serve, the physicians of the South as represented by the membership of the Southern Medical Association.

(Signed) C. P. Loranz.

Birmingham, Alabama, October 7, 1952.

Additional Statement by C. P. Loranz

FORTY-ONE YEARS OF SERVICE

Completing an additional year and today beginning my forty-second year, I cannot add much to the above statement. I do want to reiterate what I said in the last paragraph of that statement.

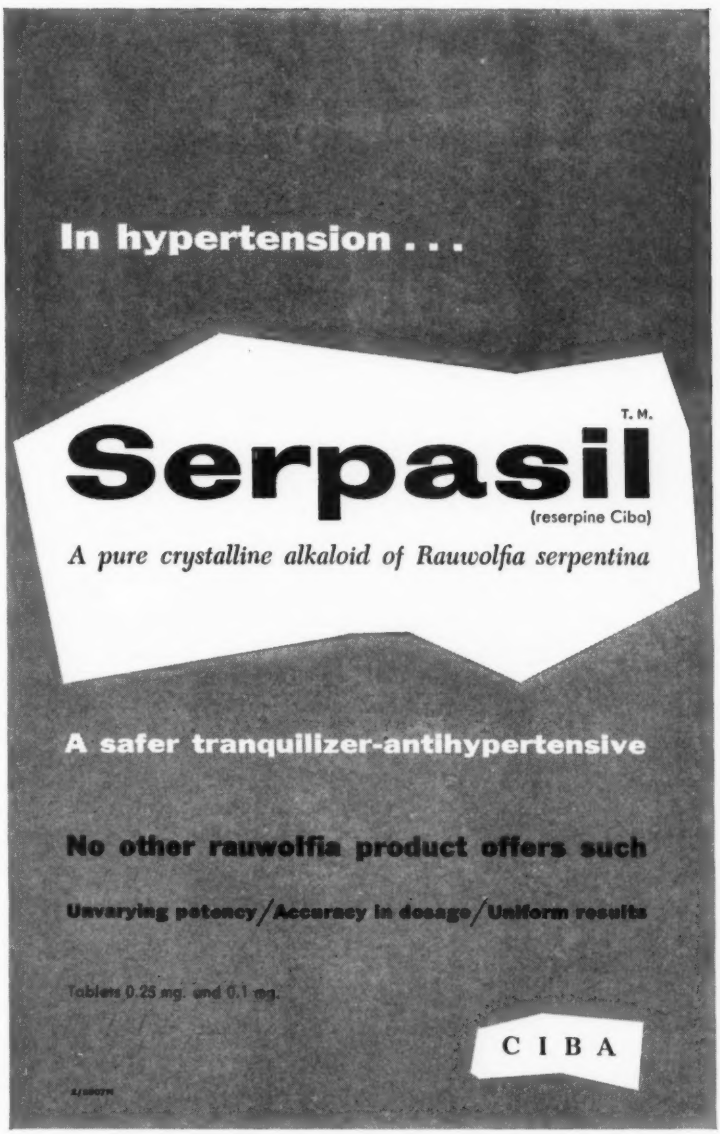
In the sixth paragraph of that statement the net worth of the Association, its liquid assets, is indicated at more than one hundred and seventy-five thousand dollars. The liquid assets of the Association are now approximately two hundred thousand dollars. Since the Southern Medical Association is a scientific, non-profit organization and its Journal, the Southern Medical Journal, is a not for sale asset, a valuation for the Journal as an asset has never been set up on the books of the Association.

In that sixth paragraph it is noted that the Association paid fifty-five thousand dollars for the Southern Medical Journal in November 1921. While the actual value of the Journal is now obviously more than its purchase price, if a valuation of the Journal as an asset was set up even at its purchase price that would make the net worth of the Southern Medical Association at this time more than two hundred and fifty thousand dollars.

The Association has set up a retirement program for those employed by the Association and have reached a retirement age and have been with the Association a given number of years. A large portion of the current liquid assets has been passed to an irrevocable trust to guarantee the retirement plan.

(Signed) C. P. Loranz.

Birmingham, Alabama, October 7, 1953.


In hypertension . . .
T. M.
Serpasil
(reserpine Ciba)
A pure crystalline alkaloid of Rauwolfia serpentina
A safer tranquilizer-antihypertensive
No other rauwolfia product offers such
Unvarying potency/Accuracy in dosage/Uniform results
Tablets 0.25 mg. and 0.1 mg.
CIBA

Continued from page 390

Missouri Hospital Association has installed Dr. Herbert S. Wright, Cape Girardeau, president; and elected Dr. Horace L. Burgin, Springfield, president-elect.

Dr. Clarence C. Reynolds has opened an office in Columbia for the practice of medicine.

Dr. Robert J. Crossen, Ladue, has been awarded by Oberlin College an alumni citation for "a brilliant record . . . as a practicing physician, research scholar, professor, and author."

Construction has begun on the 48-bed addition to the Boone County Hospital. Local citizens contributed $120,949 to augment a $100,000 gift by Dr. and Mrs. Frank G. Nifond. The local medical profession subscribed $28,725 of the contributions.

Dr. James E. Ashmore, St. Louis, will study at Harvard University on the Schering Fellowship in Endocrinology for 1953 awarded him, which is valued at $5,000.

Dr. Mark M. Marks, Kansas City, has been awarded one of the three annual awards for medical writing by the publication *Proctology* for his article, "Pilonidal Sinus: Treatment by Eventration," published in the SOUTHERN MEDICAL JOURNAL.

The Midwest Hospital Association will hold its annual meeting in Kansas City the latter part of this month.

Hospitals in St. Louis City and County reporting expansion are: Barnes Group, Deaconess, DePaul, Bethesda, Jewish, Lutheran, Missouri Baptist, St. Luke's, St. Joseph's, Cardinal Glennon, City Infirmary and Bliss Psychiatric. The expansion programs represent an outlay of approximately $30 million, it is estimated.

NORTH CAROLINA

Dr. H. L. Brockmann, High Point, was elected vice-president of the Southeastern Surgical Congress at its annual meeting held in Birmingham, Alabama, last month.

Postgraduate Medical Course for General Practitioners will be held at the University of North Carolina School of Medicine, Chapel Hill, April 13-15.

Statewide Conference on Handicapped Children, sponsored by the North Carolina State Board of Health and the North Carolina Department of Public Instruction in cooperation with

Classified Advertisements

WANTED—Doctor in a prosperous Alabama town located near Fayette, good farming section, large territory to serve, fully equipped clinic, property may be rented or bought on very liberal terms. Reason for this opportunity, doctor's death. Contact Mrs. A. H. Bobo, Covin, Alabama.

FOR SALE OR LEASE—Large brick clinic building on lot 95 x 180. Full basement partitioned into 4 rooms and kitchen—all concrete and dry at all times. First floor—entrance hall, large reception and waiting room with sun porch glass enclosed. Private office, x-ray and dark room, two large treatment rooms. Second floor—corridor full length of building, 3 double rooms, 1 single room. Natural gas heating unit furnace, air conditioned. All in good repair. Contact S. E. Mitchell, M.D., Malden, Missouri.

FOR SALE—Picker X-ray Machine 200 M. A. Complete, motor table, 2 X-ray tubes. A-1 condition. Half price. Contact A. H. Smullian, 326 Ivy Street, N. E., Atlanta, Georgia.

FOR SALE—Nice office and residence located in growing town, population 12,000 near Tampa, Florida. New 98 bed hospital recently opened. Present owner in location 33 years must give up practice because of age. Wonderful opportunity for physician interested in general practice and obstetrics. Dispense own drugs. Contact Robert C. Black, M.D., Plant City, Florida.

WANTED—Doctor to do general practice—Salary first year—Partnership basis following—Contact Hershell B. Murray, Superintendent, West Liberty Hospital, Inc., West Liberty, Kentucky.

THE NEW YORK POLYCLINIC

MEDICAL SCHOOL AND HOSPITAL

(ORGANIZED 1881)

(The Pioneer Post-Graduate Medical Institution in America)

UROLOGY

A combined full-time course covering an academic year (8 months). It comprises instruction in pharmacology; physiology; embryology; biochemistry; bacteriology and pathology; practical work in surgical anatomy and urological procedures on the cadaver; regional and general anesthesia (cadaver); office gynecology; proctological diagnosis; the use of the ophthalmoscope; physical diagnosis; roentgenological interpretation; electrocardiographic interpretation; dermatology and syphilology; neurology; physical medicine; continuous instruction in cystoendoscopic diagnosis and operative instrumental manipulation; operative surgical clinics; demonstrations in the operative instrumental management of bladder tumors and other vesical lesions as well as endoscopic prostatic resection; attendance at departmental and general conferences.

ANESTHESIOLOGY

A three months full time course covering general and regional anesthesia with special demonstrations in clinics and on the cadaver of caudal, spinal, field blocks, etc.; instruction in intravenous anesthesia, oxygen therapy, resuscitation, aspiration bronchoscopy; attendance at departmental and general conferences.

GYNECOLOGICAL and OBSTETRICAL PATHOLOGY

A course covering the embryological, physiological and pathological changes, gross and microscopic, occurring in the female genital tract. The above will be illustrated with operative and museum specimens as well as kodachrome and microscopic slides. The newer discoveries in hematology, with particular reference to hemolytic disease of the newborn, blood grouping and transfusion reactions, surgical sponge and aspiration biopsies.

GENERAL AND SPECIAL COURSES in MEDICINE, SURGERY and ALLIED SUBJECTS

For Information about these and other courses Address

THE DEAN, 345 WEST 50th STREET, NEW YORK 19, N. Y.

the North Carolina Health Council, will be held at the North Carolina Memorial Hospital, May 27-28.

Construction will begin soon on a new $3,386,000 seven-floor addition to Duke Hospital, Durham, which will provide a new outpatient clinic and more than 100 new beds.

Dr. Barnes Woodhall and Dr. Guy L. Odom, Durham, have been named president and program chairman, respectively, of the Southern Neurosurgical Society. This society covers about one-fourth of the Nation's brain surgeons.

Dr. Frank B. Brewer, since January 6, 1953 manager of the new Veterans Administration Hospital, Durham, has been appointed assistant chief medical director in charge of operations for the Veterans Administration's 171 hospitals and domiciliaries, and 104 clinics, replacing Dr. Robert C. Cook, who is retiring because of ill health.

OKLAHOMA

University of Oklahoma School of Medicine will hold its first postgraduate Industrial Medicine symposium on May 20 and 21 at the School of Medicine auditorium in Oklahoma City.

Dr. Melvin Hicks, formerly director of the Hughes County Health department, has accepted a residency in Akron, Ohio.

Dr. Evelyn Rude, Enid, has completed a residency in Brooklyn, New York, and prior to that she spent two years in Saudi-Arabia as physician to the Arabian-American Oil Company.

Dr. Charles E. Baker has opened an office in Granite.

Dr. Violet Sturgeon, Hennessey, has been elected to the board of trustees of Oklahoma Baptist University. She is the first woman to be named to this board.

Tulsa Academy of Medicine has installed Dr. L. A. Munding, president; and elected Drs. Earl Lusk, Tulsa, president-elect; Lowell Stokes, vice-president; and Marshall O. Hart, secretary-treasurer, reelected.

Dr. John E. McDonald, Tulsa, president, Oklahoma State Medical Association, has been appointed to the American Medical Association Legislative Committee, replacing Dr. F. J. L. Blasingame, Wharton, Texas, who resigned. The 10-man committee is working out plans to hold a number of regional meetings throughout the country.

Drs. George and Hope Ross and E. M. Robinson have opened a new clinic in Edin.

Dr. E. A. McGrew has built a new McGrew Clinic in Beaver. Dr. Robert M. Stover, Miami, will be associated with Dr. McGrew when he completes his residency at the University Hospital, Oklahoma City.

Dr. Clair Liebrand, Oklahoma City, has returned from a vacation in England and the Continent.

Dr. Harold G. Sleeper, Oklahoma City, has been elected councilor for Oklahoma for the Mid-Continent Psychiatric Association. This organization is the official district branch society of the American Psychiatric Association for the states of Arkansas, Kansas, Missouri and Oklahoma.

Plans have been announced by Dr. William J. Bryan, Jr., Tulsa, to have an oil portrait of the late Dr. Ian MacKenzie painted and hung at Hillcrest Medical Center as a permanent memorial. Contributions may be sent to the Tulsa County Medical Society, B-9 Medical Arts Building, Tulsa.

SOUTH CAROLINA

Dr. Leon Banov, director of the Charleston County Health Department, has been named treasurer of the American Association of Public Health Physicians.

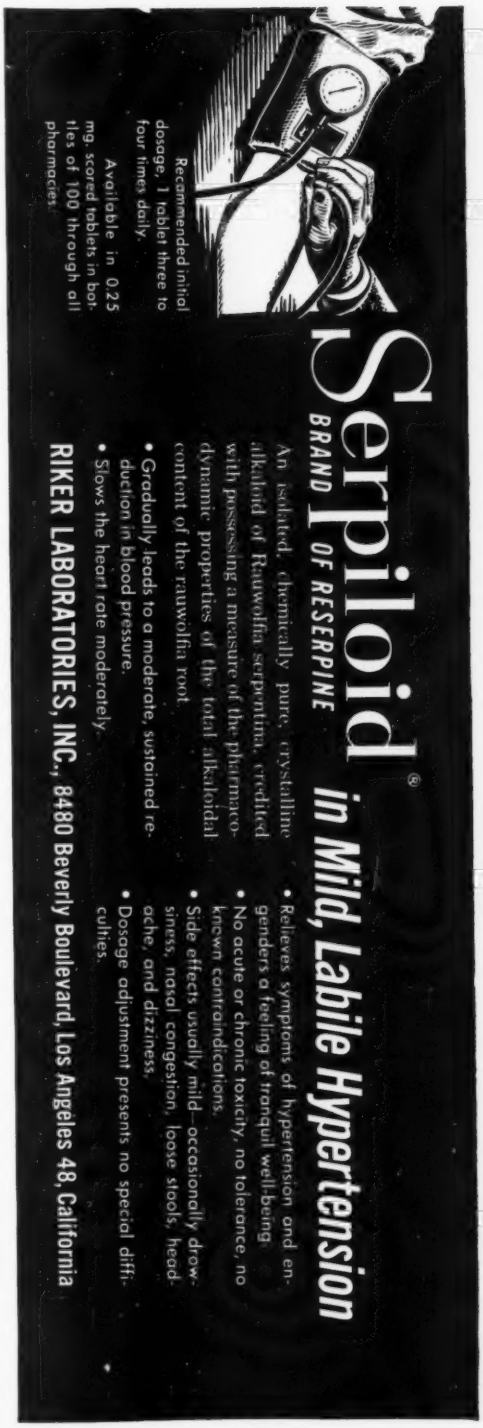
The Medical Arts Building in Charleston was opened the first of the year.

TENNESSEE

Memphis Medical Center, under the University of Tennessee Medical Units, is enlarging its teaching and research facilities by a $5,000,000 building program. The City of Memphis is spending an additional $3,000,000 to enlarge the facilities of the City of Memphis Hospitals, including the construction of a new Negro teaching hospital and the addition of two floors to the pediatric wing of the John Gaston Hospital, teaching facility of the Medical Units' College of Medicine. Baptist Memorial Hospital is adding a 450-bed addition at a cost of $5,800,000. Campbell Clinic (orthopedic surgery) is building a $500,000 addition for diagnostic purposes.

A portrait of the late Dr. Conley Hall Sanford was recently presented to the University of Tennessee College of Medicine. Dr. Sanford served the college in varying capacities from 1920 until his retirement last October at which time he was chief-

Continued on page 50


Serpiloid®
BRAND OF RESERPINE
in Mild, Labile Hypertension
An isolated, chemically pure, crystalline alkaloid of Rauwolfia serpentina, credited with possessing a measure of the pharmacodynamic properties of the total alkaloidal content of the rauwolfia root.
• Gradually leads to a moderate, sustained reduction in blood pressure.
• Slows the heart rate moderately.
• Relieves symptoms of hypertension and engenders a feeling of tranquil well-being.
• No acute or chronic toxicity, no tolerance, no known contraindications.
• Side effects usually mild—occasionally drowsiness, nasal congestion, loose stools, headache, and dizziness.
• Dosage adjustment presents no special difficulties.
Recommended initial dosage, 1 tablet three to four times daily.
Available in 0.25 mg. scored tablets in bottles of 100 through all pharmacies.
RIKER LABORATORIES, INC., 8480 Beverly Boulevard, Los Angeles 48, California

What's so *different* about the Viso-Cardiette?

THESE ARE THE COMPANY POLICIES

THAT LEAD TO THESE ADVANTAGES

SANBORN SPECIALIZES. Sanborn's *primary* and *major* interest in the medical field for the past 35 years has been the design, manufacture, and servicing of electrocardiographs. Sanborn men can therefore *concentrate* on your interest in this type of equipment.

SANBORN SELLS DIRECTLY. Each of the many thousands of Sanborn diagnostic instruments in service today has been shipped *directly* to its user. No intermediate sources are ever involved between Sanborn Company and the buyer. This permits a standardization of prices, and the cost of a Viso-Cardiette is the *same* to *every* physician.

ECG DESIGN KNOWLEDGE. Sanborn's 30 years of specialization and intimate contact with the profession's heart testing needs results in a *complete* and *concentrated knowledge* of electrocardiograph manufacture.

EXTRA BENEFITS. These stem from the Sanborn "direct-to-you" policy, and include: the bi-monthly "Technical Bulletin", which is sent free of charge to every owner; the 15-day, no-obligation, try-before-you-buy plan; and the opportunity to deal *directly* with the maker of your electrocardiograph.

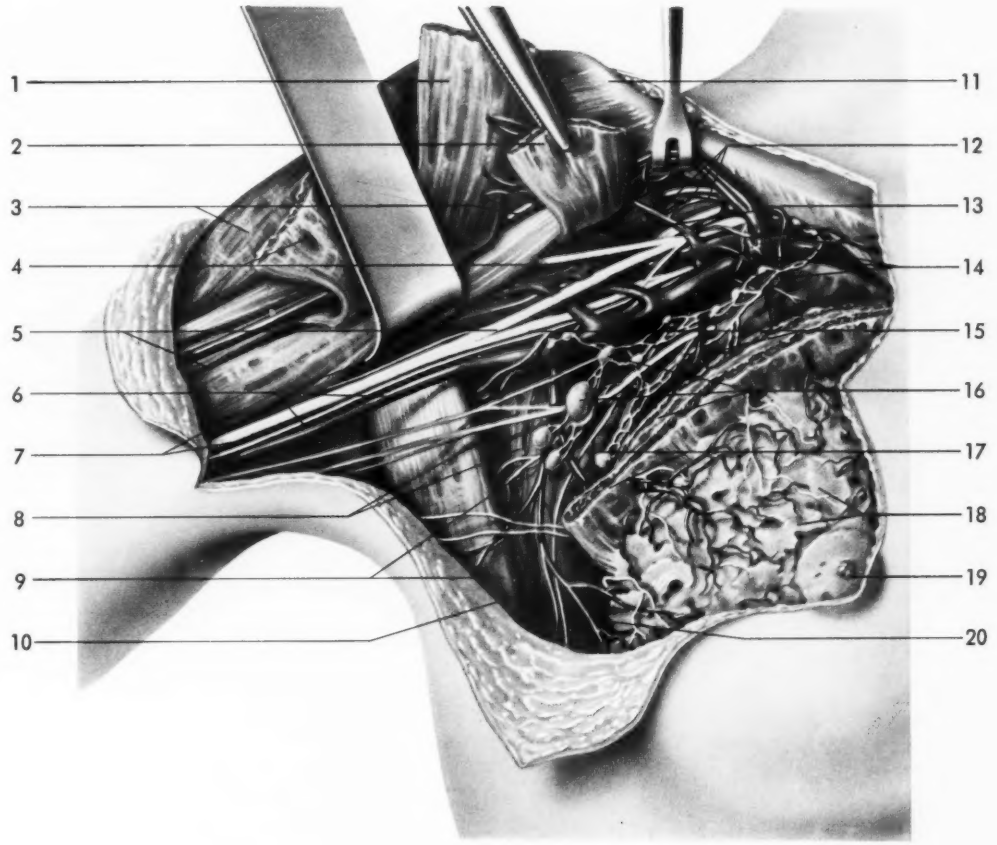
EXTENSIVE COVERAGE. The need to keep a *close contact* with Sanborn owners, and those about to be, requires a *wide* network of offices. Sanborn has thirty, one of them near you!

Because Sanborn DEPENDS on your satisfaction, YOU can depend on Sanborn people and Sanborn products. Descriptive literature which tells more about the Viso-Cardiette and the 15-day trial plan is available on request.

SANBORN COMPANY

195 Massachusetts Avenue, Cambridge 39, Massachusetts

The Axillary Region



1 Pectoralis major muscle
2 Pectoralis minor muscle
3 Deltoid muscle; cephalic vein
4 Pectoralis major muscle; musculocutaneous nerve
5 Long head of biceps brachii muscle; lateral branch of median nerve
6 Brachial artery and vein; ulnar nerve
7 Short head of biceps brachii muscle; median nerve
8 Intercostobrachial nerve; subscapularis muscle
9 Thoracodorsal nerve; latissimus dorsi muscle
10 Branch of thoracodorsal artery
11 Acromial extremity of clavicle
12 Suprascapular artery, vein and nerve
13 Thoracoacromial artery
14 Axillary artery and vein; subclavian lymphatic trunk
15 Medial branch of median nerve; lateral thoracic artery
16 Axillary lymph nodes; pectoralis major muscle
17 Long thoracic nerve; pectoralis major muscle
18 Lobes of breast
19 Papilla of breast
20 Thoracoepigastric vein

This is one of a series of paintings for Lederle by Paul Peck, illustrating the anatomy of various organs and tissues of the body which are frequently attacked by infection, where Aureomycin may prove useful.

Lederle

Aureomycin*

CHLORTETRACYCLINE

produces rapid response in

infections of the soft tissues

caused by staphylococci, streptococci,

or mixed organisms.

ORALLY: Capsules - Syrup - Drops

PARENTERALLY: Solutions

LEDERLE LABORATORIES DIVISION

AMERICAN Cyanamid COMPANY

PEARL RIVER, NEW YORK

*Trade Mark

hypnotic
prompt action

rapid elimination

clear-headed awakening

ELIXIR ALURATE 'Roche'

Available as ELIXIR ALURATE, cherry red color/ELIXIR ALURATE VERDUM, emerald green color
Each contains 0.03 Gm (½ grain) of Alurate per teaspoonful (4 cc)
in a palatable vehicle. Alurate®—brand of aprobarbital

HOFFMANN-LA ROCHE INC. • ROCHE PARK • NUTLEY 10 • NEW JERSEY

WHY AREN'T WE GETTING DOCTOR BROWN OUT OF BED SO MUCH LATELY?
THAT'S EASY, NOW THAT HE'S PRESCRIBING PHENERGAN EXPECTORANT FOR KIDDIES' COUGHS, EVERYONE IS SLEEPING BETTER.

PHENERGAN® EXPECTORANT

WITH OR WITHOUT CODEINE

(Promethazine Hydrochloride)

Wyeth®

Philadelphia 2, Pa.

in the treatment of Hypertension

Effectively

mannitol hexanitrate exerts vasodilator action and persistent relaxation of smooth muscle

New and Nonofficial Remedies: A.M.A. Council on Pharmacy and Chemistry, J. B. Lippincott, p. 243, 1953.

Safely

fewer side effects with mannitol hexanitrate ...greater percentage fall in blood pressure

N. Y. Physician *31*:20 (Jan.) 1949.

Economically

combined medication that provides simultaneously:

vasodilatation (mannitol hexanitrate)
diuresis (theophylline)
sedation (phenobarbital)
capillary protection (ascorbic acid + rutin)

Semhyten®

BRINGS THE PRESSURE DOWN SLOWLY **SAFELY**

Complete Medication for the Hypertensive

Each Semhyten Capsule contains:		Phenobarbital	¼ gr. (15 mg.)
Mannitol Hexanitrate	½ gr. (30 mg.)	Rutin	10 mg.
Theophylline	1½ gr. (0.1 Gm.)	Ascorbic Acid	15 mg.

Supplied: In bottles of 100, 500 and 1000 pink-top capsules.

The S. E. MASSENGILL Company • Bristol, Tennessee

What about Cobalt?
–in anemia–

Q. Why is Roncovite* effective in anemias of bone marrow depression due to infection or disease?

A. Because cobalt is the only agent known which, by stimulating erythropoiesis, will cause the hemopoietic system to utilize the iron already available to it.

Q. Why use cobalt in iron-deficiency anemia—isn't iron alone adequate?

A. Roncovite is preferentially indicated in ALL forms of "secondary" or iron-deficiency anemia for the following reasons:

Many so-called iron-deficiency anemias are in reality a combination of an iron-deficiency and an inhibition of hemopoiesis *resulting from long continued extra drain* on the bone marrow.

With iron alone,[1] therefore, a complete clinical response is often difficult or impossible to obtain—only very small gains or poor responses being frequently reported in "low-grade anemias."

Roncovite, by providing the added bone marrow (red cell) stimulant action of cobalt, will supply that added extra "push" to mobilize iron reserves, produce a faster response, greatly superior erythropoiesis and up to fourfold increases in the utilization of iron.[2]

Q. Can I be sure that cobalt is safe for routine use?

A. Cobalt is an essential element with a low order of toxicity—no greater than that of iron. A cobalt chloride dosage of as high as 1200 mg. per day, in divided doses, has produced no severe toxic effects even if continued for six weeks.[3] This is equivalent to a daily dosage of over 80 Roncovite tablets.

Q. Is cobalt cumulative?

A. No—extensive pharmacological investigation proves that cobalt is rapidly and almost completely excreted via the urine[4] so that there is little if any cumulative effect even after periods exceeding 100 days of continuous parenteral use. The body shows no significant amounts of cobalt 48 hours after the last dose.[4]

Q. Is the improvement with Roncovite noticeably rapid?

A. Yes—the patient often voluntarily reports an increased sense of well-being within a few days—as reported by documented clinical evidence.

Roncovite is not indicated in pernicious or megaloblastic anemia.

RONCOVITE

The First True Hematopoietic Stimulant

HOW SUPPLIED:

Roncovite Tablets—enteric coated, red, each contains cobalt chloride, 15 mg.; exsiccated ferrous sulfate, 0.2 Gm.; bottles of 100. Dose: One tablet 4 times a day.

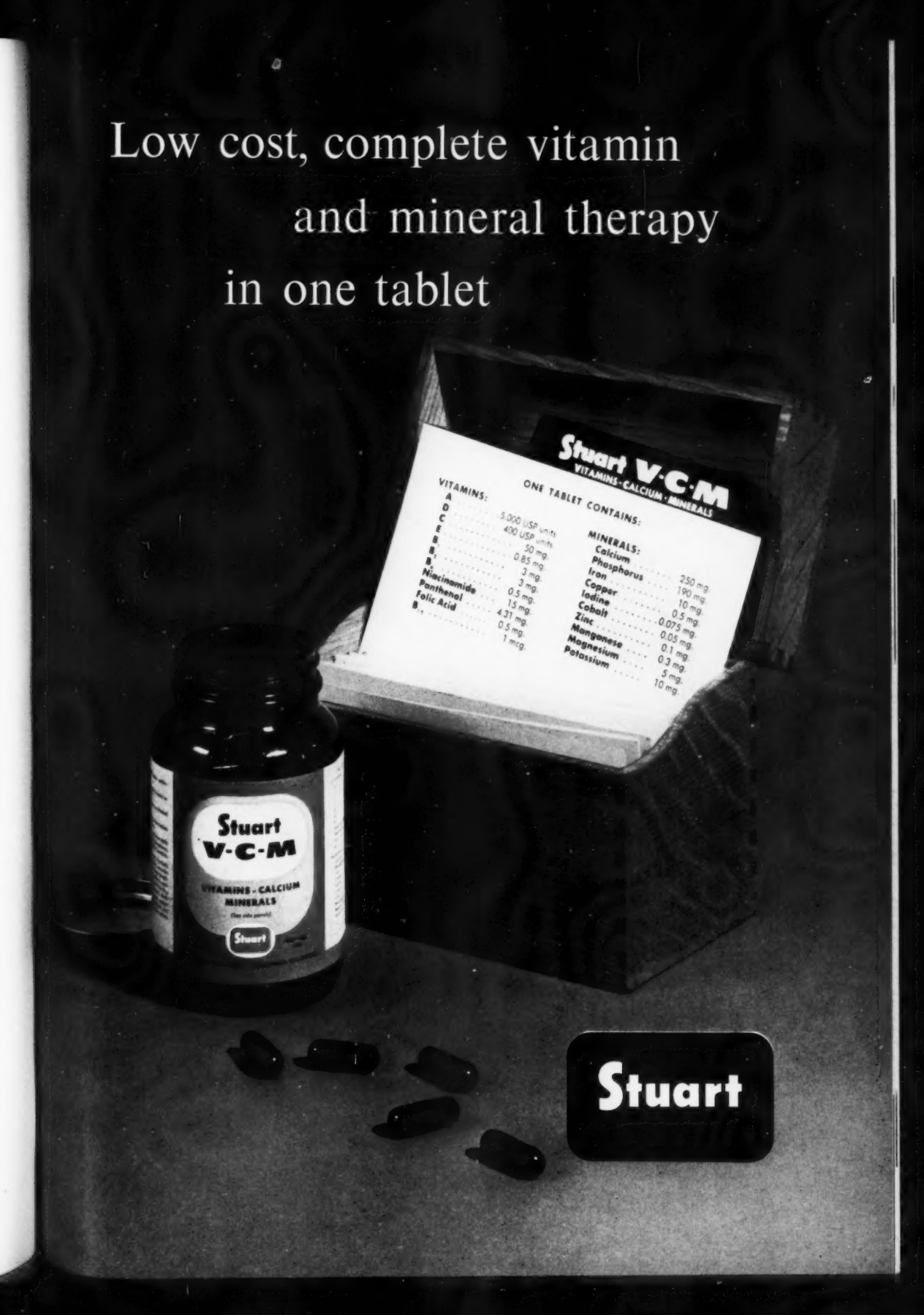
Roncovite Drops—each 0.6 cc. contains cobalt chloride, 40 mg.; ferrous sulfate, 75 mg.; bottles of 15 cc. with calibrated dropper. Dose: 0.6 cc. daily.

1. Cass, L. J.; Frederick, W. S., and DiGregario, S.: Journal-Lancet *51*:73 (1953).
2. Rohn, R. J., and Bond, W. H.: Jnl.-Lancet *73*:317 (1953).
3. Berk, W., et al: New England J. M. *240*:754 (May) 1949.
4. Berlin, N. I.: J. Biol. Chem. *187*:41 (1950).

*The original Cobalt-Iron Product.

LLOYD BROTHERS, Inc., Cincinnati 3, Ohio

Low cost, complete vitamin and mineral therapy in one tablet



Continued from page 43

of staff of John Gaston Hospital and chief of the Division of Medicine of the College of Medicine.

Dr. O. H. Derryberry, Chattanooga, director of health for the Tennessee Valley Authority, has been appointed to the staff of the University of Tennessee College of Medicine, Memphis, as a lecturer in preventive medicine. Memphis physicians appointed are Dr. Jerome Swaris, assistant professor of medicine; and Dr. Bennett E. Everett, Jr., instructor in obstetrics and gynecology.

Dr. Sam H. Sanders, Jr., has been named head of the Department of Otology, Laryngology, and Rhinology, University of Tennessee College of Medicine, Memphis, succeeding Dr. Charles Blassingame, who asked to be relieved of his administrative duties.

Dr. O. W. Hyman, vice-president of the University of Tennessee, in charge of the Medical Units and dean of the College of Medicine, Memphis, has been awarded the 1953 Citizenship Award by the Newspaper Guild of Memphis, an organization of Memphis newspaper men.

A portrait of the late Dr. E. E. Francis, former professor of surgery, University of Tennessee College of Medicine, Memphis, has been presented to the University.

The special training Division of the Oak Ridge Institute of Nuclear Studies will offer three basic isotope technics courses during the summer: starting dates, June, July 12, and August 9.

Nashville Surgical Society has elected Dr. Eugene M. Regen, president; Dr. Cleo M. Miller, vice-president; and Dr. Ray O. Fessey, secretary-treasurer.

Memphis Surgical Society has elected Dr. Jewell M. Dorris, president; Dr. Robert M. Pool, vice-president; and Dr. J. Malcolm Aste, secretary-treasurer.

Tennessee State Orthopedic Society was recently chartered under the general welfare laws of Tennessee for the purpose of promoting education in the field of orthopedic surgery. Incorporators: Dr. Samuel B. Prevo, Dr. Eugene Regen, Dr. J. William Hillman, Dr. George K. Carpenter, and Dr. S. Benjamin Fowler, all of Nashville.

Four tuberculosis hospitals were completed recently in Tennessee, built at a total cost of $11,500,000, of which the state furnished $8,500,000 and the federal government $5,000,000. With the opening of the 224-bed $4,300,000 hospital in East Nashville, the state's total TB beds operated by the state number 924. Other hospitals completed and in operation are at Chattanooga (120 beds), Memphis (400 beds), and Knoxville (180 beds).

Dr. Arnold M. Meirowsky, Nashville, has been elected to active membership in the Society of Medical Consultants to the Armed Forces. He was former Neurological Consultant to the Chief Surgeon of the Far East Command.

Dr. Robert Lee Chalfant has become associated with the Burch Clinic, Nashville, practice limited to obstetrics and gynecology.

Drs. J. B. Phillips and Harold B. Henning are associated in the practice of medicine at Chattanooga.

Dr. John D. Caldwell, formerly of Florence, Alabama, has opened offices in Morristown for the practice of general medicine and surgery.

Dr. Clarence C. Woodcock, recently released from military service, has reopened his office in Nashville for the practice of internal medicine.

Dr. H. W. Qualls, Memphis, is the new chief-of-staff of the Memphis Eye, Ear, Nose and Throat Hospital.

Dr. J. Howard Young, Jr., is associated with Dr. J. C. Armstrong, Waverly, in general practice.

Dr. Burgin H. Wood announces his association with Dr. George L. Rea, Tazewell, for the general practice of medicine.

Dr. Dalton Oliver, Clarksville, is a member of the staff of the Acuff Clinic, Knoxville.

Dr. H. L. Monroe, Erwin, succeeds Dr. John Knapp, Elizabethton, as president of the John Sevier Chapter of the Tennessee Academy of General Practice.

Dr. A. F. Russell, Clarksville, has been elected president of the staff of the New Memorial Hospital.

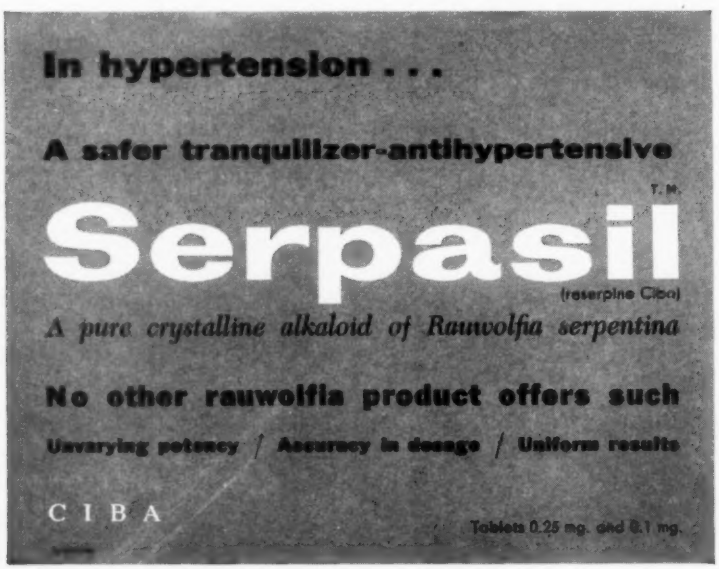
Dr. J. H. Farrar, Manchester, is the new chief-of-staff of the Coffee County Hospital.

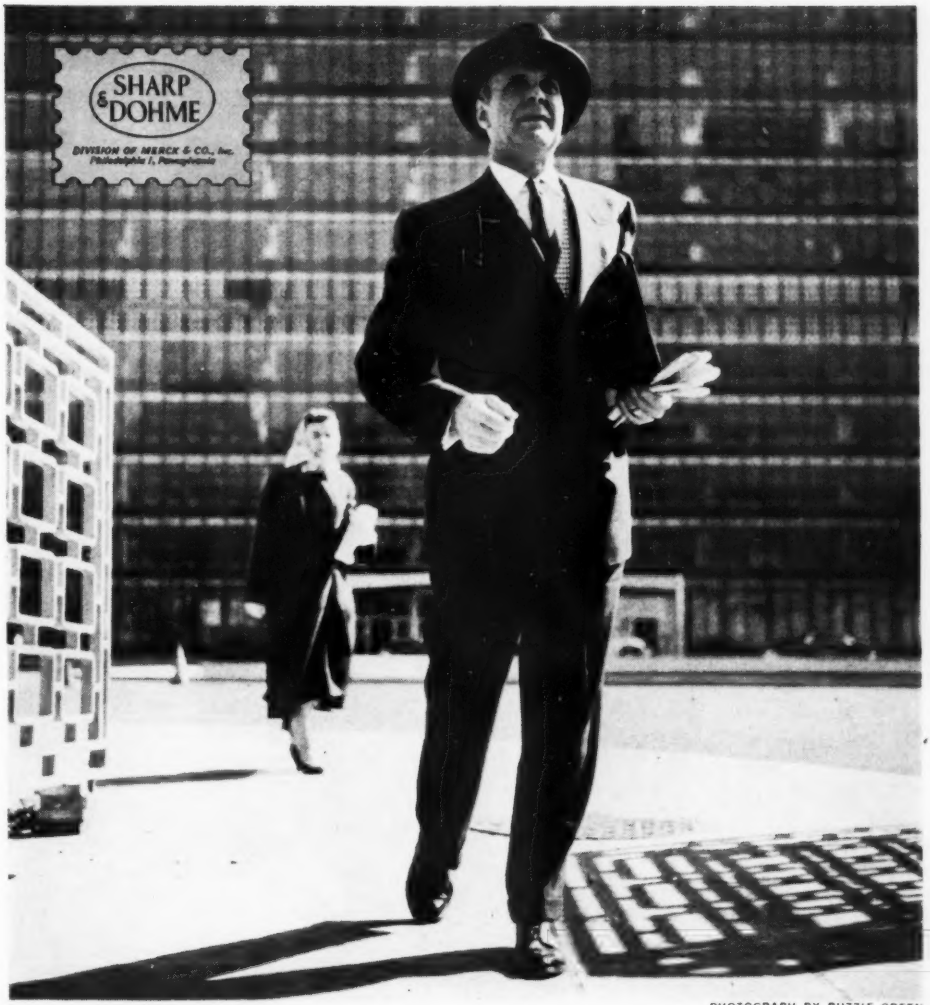
Dr. Robert Treadwell Miller is associated with Dr. William R. Green, Chattanooga, for the practice of pediatrics.

Dr. James W. Koenig has located in Charleston for the general practice of medicine.

Dr. James S. Henry has temporary offices in the Blount National Bank Building, Maryville, for the practice of medicine.

Continued on page 62


In hypertension . . .
A safer tranquilizer-antihypertensive
T. M.
Serpasil
(reserpine Ciba)
A pure crystalline alkaloid of Rauwolfia serpentina
No other rauwolfia product offers such
Unvarying potency / Accuracy in dosage / Uniform results
CIBA
Tablets 0.25 mg. and 0.1 mg.



PHOTOGRAPH BY RUZZIE GREEN

Released from spasm—he steps out freely...

DEPROPANEX®

DEPROTEINATED PANCREATIC EXTRACT

You give non-narcotic relief of smooth muscle spasm with DEPROPANEX. Its effect is entirely physiologic—for DEPROPANEX acts directly on smooth muscle.

This useful drug is valuable in ureteral, renal and biliary colic. Postoperatively, it controls paralytic ileus... makes possible "an easier, more pain-free recovery."[1] In intermittent claudication, continuing treatment restores your patient to useful living... increases walking distance by as much as 400%.

Quick Information: Supplied in 10 cc. and 30 cc. rubber-capped vials. Dosage schedules in package circular.

Reference: 1. Minnesota Med. 33:1103, 1950.

BASIC broad-spectrum therapy

BASIC taste appeal

ROERIG

536 Lake Shore Drive, Chicago 11, Illinois

racyn

brand of **tetracycline**

suspension

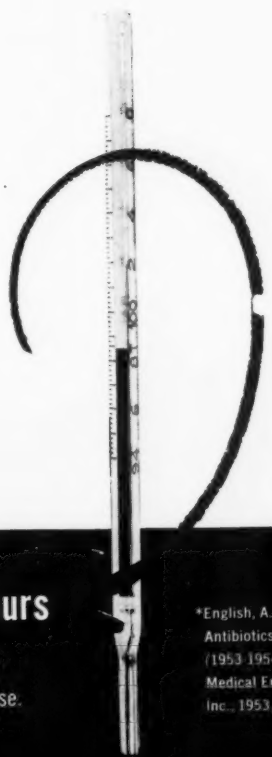
newest dosage form of the newest
broad-spectrum antibiotic
for younger patients and all those
who prefer flavorful medicine

chocolate flavor—all-time taste favorite

wide antimicrobial range

unexcelled tolerance

high blood levels

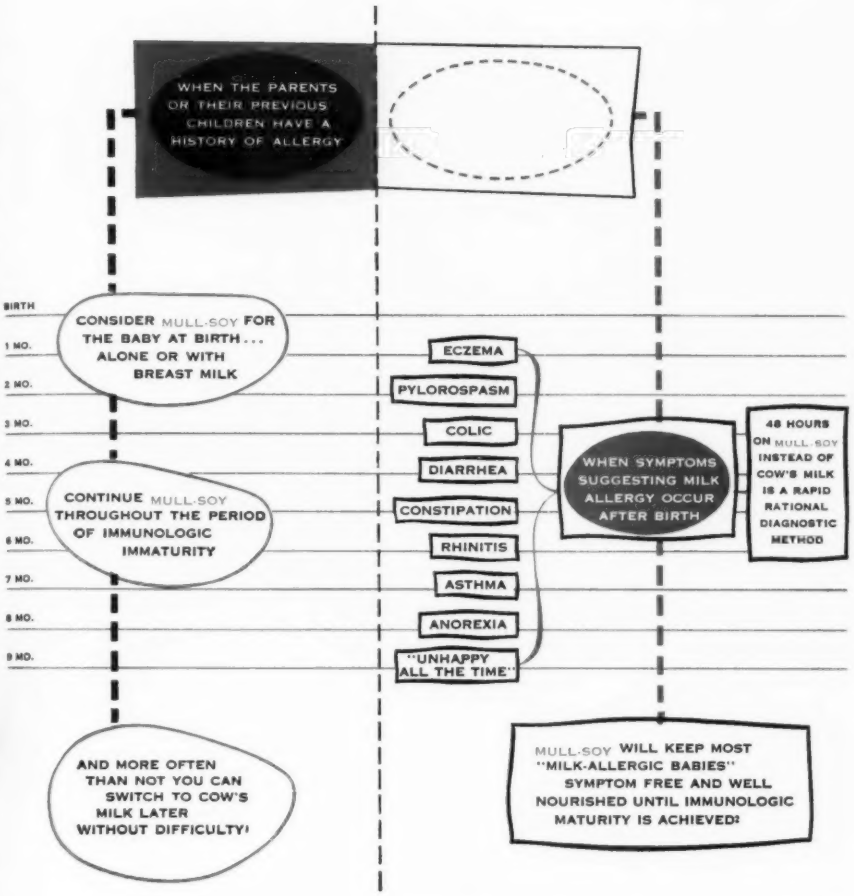
stable and soluble

febrile n ours

"... in patients with pneumococcal pneumonia, surgical infections, or urinary tract infections ... oral administration ... is followed by rapid clinical response. **Symptoms, including fever, largely cleared up within 24 to 48 hours."***

*English, A. R., et al.: Antibiotics Annual (1953-1954). New York, Medical Encyclopedia, Inc., 1953, p. 70.

the literature on **MULL-SOY® Liquid**

Cahill, W. M.; Schroeder, L. J., and Smith, A. H.: Digestibility and Biological Value of Soybean Protein in Whole Soybeans, Soybean Flour, and Soybean Milk, J. Nutrition 28:209, 1944 • Stoesser, A. V.: Clinical Evaluation of Soy Bean Food in Eczema of the Child, Ann. Allergy 4:404, 1944 • Schroeder, L. J.; Cahill, W. M., and Smith, A. H.: The Utilization of Calcium in Soybean Products and Other Calcium Sources, J. Nutrition 32:43, 1946 • Stoesser, A. V.: Influence of Soybean Products on the Iodine Number of the Plasma Lipids and the Course of Eczema, J. Allergy 18:29, 1947 • Clein, N. W.: Cow's Milk Allergy in Infants, Ann. Allergy 9:195, 1951 • Sternberg, S. D., and Greenblatt, I. J.: Serum Protein Values in Infants fed Soy-Bean Milk, Ann. Allergy 9:190, 1951 • Sobel, S. H.: Milk Allergy in a Case of Triplets, Clin. Med. 59:362, 1952 • Glaser, J., and Johnstone, D. E.: Soy Bean Milk as a Substitute for Mammalian Milk in Early Infancy, Ann. Allergy 10:433, 1952 • Stoesser, A. V., and Nelson, L. S.: The Beneficial Effects of Soy Bean Products in Eczema of Infancy and Childhood, Journal-Lancet 73:487, 1953 • Glaser, J., and Johnstone, D. E.: Prophylaxis of Allergic Disease in the Newborn, J.A.M.A. 153:620, 1953 • Johnstone, D. E., and Glaser, J.: Use of Soybean Milk as an Aid in Prophylaxis of Allergic Disease in Children, J. Allergy 24:434, 1953 • Moore, I. H.: Infant Food Allergy, Journal-Lancet 74:80, 1954.


WHEN THE PARENTS OR THEIR PREVIOUS CHILDREN HAVE A HISTORY OF ALLERGY
BIRTH
1 MO.
2 MO.
3 MO.
4 MO.
5 MO.
6 MO.
7 MO.
8 MO.
9 MO.
CONSIDER MULL-SOY FOR THE BABY AT BIRTH... ALONE OR WITH BREAST MILK
CONTINUE MULL-SOY THROUGHOUT THE PERIOD OF IMMUNOLOGIC IMMATURITY
AND MORE OFTEN THAN NOT YOU CAN SWITCH TO COW'S MILK LATER WITHOUT DIFFICULTY!
ECZEMA
PYLOROSPASM
COLIC
DIARRHEA
CONSTIPATION
RHINITIS
ASTHMA
ANOREXIA
"UNHAPPY ALL THE TIME"
WHEN SYMPTOMS SUGGESTING MILK ALLERGY OCCUR AFTER BIRTH
48 HOURS ON MULL-SOY INSTEAD OF COW'S MILK IS A RAPID RATIONAL DIAGNOSTIC METHOD
MULL-SOY WILL KEEP MOST "MILK-ALLERGIC BABIES" SYMPTOM FREE AND WELL NOURISHED UNTIL IMMUNOLOGIC MATURITY IS ACHIEVED2

EASY TO PRESCRIBE—TO TAKE—TO DIGEST

MULL-SOY® Liquid

HYPOALLERGENIC SOY FOOD FOR INFANTS, CHILDREN, AND ADULTS

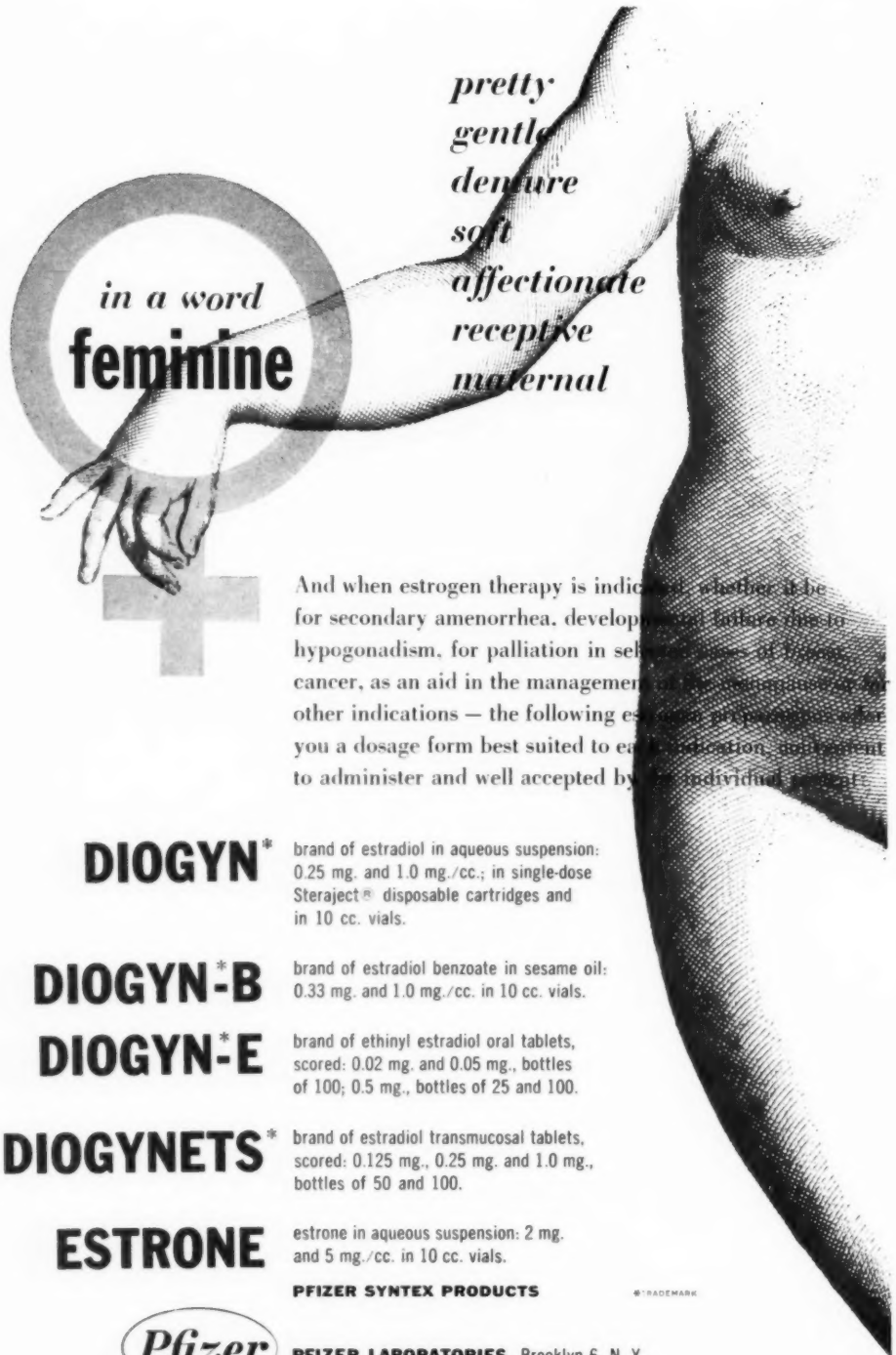
An emulsified liquid soy preparation, MULL-SOY provides in one hypoallergenic source the protein, fat, carbohydrate, and minerals essential for infant feeding. Palatable, safe, easily digested, and as easy to use as evaporated milk, MULL-SOY is a logical basic formula for milk-sensitive infants.

Standard dilution is 1:1 with water... available in 15½-oz. tins at all pharmacies.

Professional literature and samples are available on request.

Prescription Products Division **The BORDEN Company, 350 Madison Avenue, New York 17, N.Y.**

1. Glaser, J., and Johnstone, D. E.: Ann. Allergy 10:433, 1952.
2. Clein, N. W.: Ann. Allergy 9:195, 1951.



And when estrogen therapy is indic[illegible] whether it be for secondary amenorrhea, develop[illegible] failure due to hypogonadism, for palliation in sel[illegible] cases of breast cancer, as an aid in the manageme[illegible] other indications — the following e[illegible] you a dosage form best suited to e[illegible] to administer and well accepted by [illegible]

DIOGYN* brand of estradiol in aqueous suspension: 0.25 mg. and 1.0 mg./cc.; in single-dose Steraject® disposable cartridges and in 10 cc. vials.

DIOGYN-B* brand of estradiol benzoate in sesame oil: 0.33 mg. and 1.0 mg./cc. in 10 cc. vials.

DIOGYN-E* brand of ethinyl estradiol oral tablets, scored: 0.02 mg. and 0.05 mg., bottles of 100; 0.5 mg., bottles of 25 and 100.

DIOGYNETS* brand of estradiol transmucosal tablets, scored: 0.125 mg., 0.25 mg. and 1.0 mg., bottles of 50 and 100.

ESTRONE estrone in aqueous suspension: 2 mg. and 5 mg./cc. in 10 cc. vials.

PFIZER SYNTEX PRODUCTS *TRADEMARK

Pfizer **PFIZER LABORATORIES,** Brooklyn 6, N. Y.
Division, Chas. Pfizer & Co., Inc.

Daprisal*

relieves both aspects of pain

physical—because it provides the combined analgesic effect of acetylsalicylic acid and phenacetin, potentiated by amobarbital.

psychic—because it provides the mood-ameliorating effect of Dexamyl* (Dexedrine† and amobarbital).

Formula: Each 'Daprisal' tablet contains 'Dexedrine' Sulfate (dextro-amphetamine sulfate, S.K.F.), 5 mg.; amobarbital, ½ gr. (32 mg.); acetylsalicylic acid, 2½ gr. (0.16 Gm.); phenacetin, 2½ gr. (0.16 Gm.).

Smith, Kline & French Laboratories, Philadelphia

*T.M. Reg. U.S. Pat. Off.

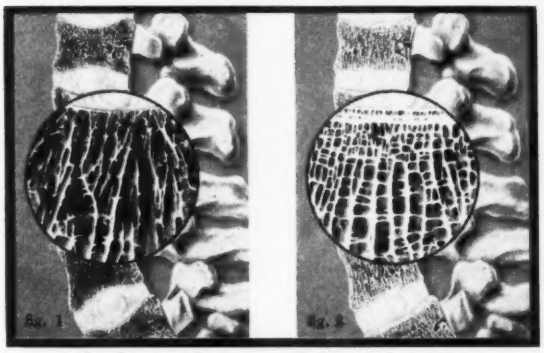
†T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

Prescribe the new antacid, Trevidal, to provide for your patients not only immediate, maximal and prolonged acid neutralization, but also protection of irritated mucous surfaces against further attack by gastric acid. Trevidal provides a unique combination of four clinically established antacids, balanced to avoid constipation, diarrhea, or alkalinosis, plus a special vegetable gum, Regonol*, which coats the ulcer crater within seconds, plus a protein binder from oat which controls and prolongs the antacid activity. Each Trevidal tablet contains 105 mg of calcium carbonate, 60 mg of magnesium carbonate, 90 mg of aluminum hydroxide gel dried, 150 mg of magnesium trisilicate, 100 mg of Regonol,*† and 45 mg of Egraine.*‡ Trevidal is available in boxes of 100 cellophane stripped tablets.

*Trade Marks
†Cyamopsis tetragonoloba gum
‡Protein binder from oat
Trevidal Patent Pending

Organon INC. • ORANGE, N. J.

AGING CHANGES THE BONE PICTURE



lumbar vertebrae, magnified sagittal sections

The vital role that estrogen and androgen play in the preparation and recalcification of bone matrix readily explains why declining sex hormone production which accompanies aging is most frequently the cause of osteoporosis. Note typical atrophic changes characteristic of postmenopausal osteoporosis (fig. 1) in contrast to normal bone matrix (fig. 2). Reifenstein* is of the opinion that some degree of osteoporosis is almost "physiologic" after the menopause, and that clinical osteoporosis may be found in about 10 per cent of women over 50 years of age.

With combined estrogen-androgen therapy, "pain in the spine and other bones is relieved considerably or completely in a matter of weeks to months," and with extended periods of treatment, the prognosis for bone recalcification is good.*

Combining both estrogen and androgen, "Premarin" with Methyltestosterone provides a dual approach for maximum efficiency in treating osteoporosis. A brochure outlining full details of therapy is available at your request.

*Reifenstein, E. C., Jr., in Harrison, T. R.: Principles of Internal Medicine, Philadelphia, The Blakiston Company, 1950, p. 655.

"Premarin" with Methyltestosterone is supplied in two potencies: the *yellow* tablet (No. 879) contains 1.25 mg. of conjugated estrogens equine and 10 mg. of methyltestosterone; the *red* tablet (No. 878) contains 0.625 mg. and 5 mg. respectively. Both potencies are available in bottles of 100 and 1,000 tablets.

"PREMARIN"® with METHYLTESTOSTERONE

for combined estrogen-androgen therapy

Ayerst

New York, N. Y., Montreal, Canada

5422

"A program of treatment
for *chronic ulcerative colitis...*

as described by Lester M. Morrison, M.D., Los Angeles[1]

... is based on the use of 1) azopyrine*, 2) ACTH or cortisone and 3) psychotherapy."

"Azopyrine* ... has been effective in controlling the disease in approximately two-thirds of patients who had previously failed to respond to standard colitis therapy currently in use."

1. Rev. Gastroenterology 20:744 (Oct.) 1953; abstract in J. A. M. A., 153:1580 (Dec. 26) 1953.

Azulfidine®
BRAND OF SALICYLAZOSULFAPYRIDINE

**now available under the name ...*

literature on request from

PHARMACIA LABORATORIES, Inc.

Executive Offices: 270 Park Ave., New York 17, N. Y. • Sales Office: 300 First Street, N. E., Rochester, Minn.

the leader in research

mattern

creator of push-button controls now brings you an important advance in X-Ray Technology:

"DUOTECH" CONTROL UNIT

*"DUOTECH" Milliampere Second (MaS) Integrator gives a revolutionary concept of accuracy in radiographic quality control with the fastest possible time of exposure. You get radiographs of consistent density regardless of power line conditions or other factors ... and the shorter exposure time gives sharper detail

*The "DUOTECH" Simplified Technique reduces the usual 3 operational steps to 2. The Technician makes only 2 selections: MaS and PKV. It's easier and faster, while giving complete protection to the X-ray tube.

with the "DUOTECH" you get consistently better results with *MODERATELY PRICED* equipment, formerly obtainable *only* with the most expensive!

send today for free booklet ▶

MATTERN X-RAY

F. MATTERN MFG. CO.

F. Mattern Mfg. Co.
4635-59 No. Cicero Ave.
Chicago 30, Illinois

☐ *Please send me free booklet about the "DUOTECH"*
☐ *Have your dealer call for appointment*

Name_____
Address_____
City_____ State_____ Phone_____

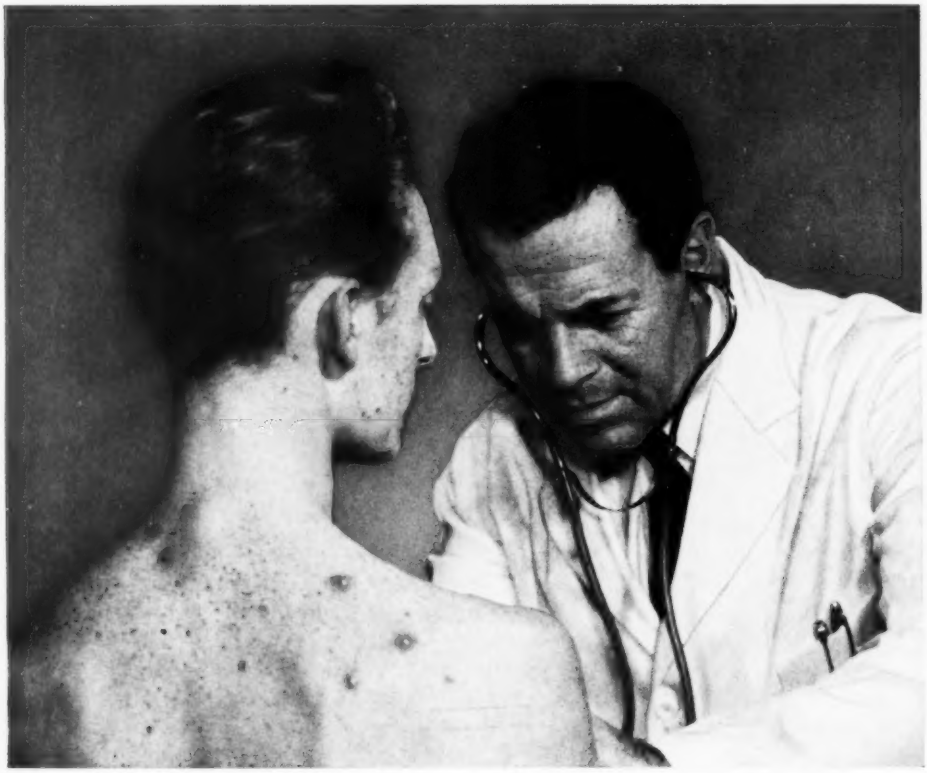
Dexedrine*

Acknowledged to be the agent of choice
(1) for control of appetite in weight reduction
and (2) as an antidepressant

Tablets · Elixir · Spansule† capsules

Smith, Kline & French Laboratories, Philadelphia

*T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.
†Trademark for S.K.F.'s brand of sustained release capsules (patent applied for).



Acne is seldom the presenting complaint

Many teen-agers, particularly boys, are too self-conscious about their acne to come to you for treatment. But, when they see you for other cause, you have an opportunity to treat their acne, too.

ACNOMEL's clinically proved active ingredients—resorcinol, sulfur and hexachlorophene in a special grease-free vehicle—bring rapid improvement in acne not in weeks or months, but in days.

ACNOMEL's delicately flesh-tinted base masks unsightly acne lesions, yet is virtually invisible when applied. It may, therefore, be applied at any time —during the day, or at night before retiring.

For acne

Acnomel* Cream

for patients with oily skin

'Acnomel' Cake

½ strength for patients with sensitive skin

Smith, Kline & French Laboratories, Philadelphia

*T.M. Reg. U.S. Pat. Off.

Formula: 'Acnomel' Cream contains 8% sulfur, 2% resorcinol and 0.25% hexachlorophene in a stable, grease-free, flesh-tinted vehicle.
'Acnomel' Cake contains 4% sulfur, 1% resorcinol and 0.25% hexachlorophene in a washable, flesh-tinted cake base.

PHOTOGRAPH BY CHARLES KERLEE

Bounces back to normal with

PENTRESAMIDE®

TRIPLE SULFONAMIDE WITH PENICILLIN

Serious infections of mixed bacterial origin respond so rapidly to PENTRESAMIDE that your patients seem almost to bounce back to normal. Even in pneumonia, a single oral dose of this established antibiotic-sulfonamide produces "striking therapeutic results."[1] Easy-to-take, it is especially suitable for children.

Quick Information: PENTRESAMIDE-100 and PENTRESAMIDE-250 *Tablets* provide in each tablet 0.1 *Gm.* sulfamerazine, 0.2 *Gm.* each sulfamethazine and sulfadiazine with 100,000 or 250,000 units potassium penicillin G. Dosage schedules on request.

Reference: 1. New York State J. Med. 50:2293, 1950.

We have fed soils to produce larger crops; animals to produce more young, meat, wool, milk; and poultry to produce more living chicks, eggs and pounds. We take small animals, give them or stop scurvy; increase or stop growth; increase or prevent reproduction; produce and cure rickets; increase the mother's milk and make it richer; create diet deficiency diseases and cure them, all through sufficient or deficient vitamins, mineral salts and protein bal ances added to the other well-known food constituents.

We can with food facts, now at hand, feed children for surer, better growth; men and women for better well being, greater energy and longer youth and life spans.

One outstanding phase of vitamin research is the discovery that certain vitamins, formerly believed to be well defined single individuals, are actually mixtures of several separated and unseparated parts, as for vitamin B. Of major importance in adequate nutrition is that the whole of each vitamin and enough of each are needed to do the complete vitamin job.

So far, in all of research dried brewers' yeast is outstanding for potency and dependability for all of the known vitamin B needs. VITA-FOOD Red Label (Debittered) and Green Label (Non-debittered) Brewers' Yeast, pioneers, have a long record in nutrition and medicine not excelled by any other brand.

VITAMIN FOOD CO., INC.

157 SYLVAN AVE.

NEWARK 4, NEW JERSEY

Continued from page 50

TEXAS

American Association of Anatomists will meet in Galveston, Hotel Galvez, April 7-9.

Conference on Microcirculatory Physiology and Pathology will be held at the University of Texas, Galveston, April 8-9.

A voluntary committee composed of Dr. William G. Wolfe, (Ph.D.), director of special education in the Department of Educational Psychology, University of Texas, Austin, chairman; Dr. Lewis M. Helfer, San Antonio, Dr. Ralph Hanna, Austin; and Leon Reed, Graduate student in special education at the University of Texas, Austin, serving without pay, is administering a $10,000 grant from United Cerebral Palsy of Texas. This appropriation will finance the cost of a two-year study to locate children suffering from cerebral palsy. The State Department of Health has turned over 30,000 case histories of handicapped and crippled children to the committee, and the Texas Medical Association is cooperating in an effort to locate cerebral palsy children. A program of care and rehabilitation, based on these findings, will be blueprinted, and the data gathered will serve as a guide for action to the Texas Education Agency and other private and public agencies.

Texas physicians have been invited to join members of the California Medical Association in a tour of Europe, April 5-May 5, to attend scientific meetings and meet medical leaders en route.

Dr. William E. Morris has been selected as the "Outstanding Young Man" in Corpus Christi for 1953.

Dr. J. M. Sullivan has been selected by the people of Sanger as their outstanding citizen for 1953.

Dr. Roger Hanna, formerly superintendent and medical director, Jackson County Tuberculosis Sanatorium, Jackson, Michigan, is director of tuberculosis hospitals operated by the state of Texas.

Dr. W. R. Cooke, Galveston was honored recently by the unveiling of an oil portrait of him which is to be placed in the new John Sealy Hospital building.

Dr. Robert N. Cooley, formerly associated with the Johns Hopkins University School of Medicine, Baltimore, Maryland, is professor of radiology and chairman of the Department of Radiology, University of Texas Medical Branch, Galveston.

Continued on page 65

CITY VIEW

SANITARIUM

For the diagnosis and treatment of nervous and mental disorders, and addictions to alcohol and drugs.

Established 1907

NASHVILLE, TENNESSEE

Mood
Elevation Needed?
Here is a Better Approach

Rauwidrine

THE INCREASING number of patients with functional complaints seen in everyday practice no longer constitutes the therapeutic problem of former days. No longer need the physician be concerned with the side actions which heretofore so frequently vitiated the desirable actions of amphetamine in adequate dosage.

Why court insomnia, jitteriness, tremor?

Rauwidrine solves this problem. It combines in one tablet, 5 mg. of amphetamine sulfate with the cardiac-calming, tranquilizing, mildly sedative action of Rauwiloid® (1 mg.).

The advantages of this combination are apparent. The mood-elevating influence of the amphetamine component is fully retained and augmented by that of Rauwiloid. But the cardiac pounding due to amphetamine is obviated by the cardiac-calming engendered by Rauwiloid; the jitteriness, irritability, and insomnia so often disturbing when amphetamine alone is used, are held in abeyance by the tranquilizing, mildly sedative influence of Rauwiloid, and without the use of barbiturates.

Since Rauwiloid does not significantly lower the blood pressure in normotensives, it is eminently suited for use in this combination. In hypertensive patients or those with other cardiovascular disease Rauwidrine should be used with caution.

For obesity, too!

In weight reduction management Rauwidrine proves advantageous because the appetite-suppressing effect of the contained amphetamine can be maintained for long periods, without fear that amphetamine will become intolerable for the patient.

DOSAGE: ***For mood elevation,*** one to two tablets, each before breakfast and lunch. Dosage should be individualized, and as much as 6 tablets per day (in 3 doses) may be given if needed.
For obesity, one to two tablets 30 to 60 minutes before each meal.

Riker
LABORATORIES, INC.
8480 Beverly Boulevard • Los Angeles 48, California

to forestall resistance Biosulfa

in everyday practice

PENICILLIN
still the antibiotic of first choice for common infections . . .

REINFORCED BY

TRIPLE SULFONAMIDES
to increase antibacterial range and reduce resistance . . .

Three strengths:
125M, 250M, 500M

Each tablet contains:
Penicillin G Potassium, Crystalline 125,000 (or 250,000 or 500,000) units
Sulfadiazine . . . . . 0.167 Gm.
Sulfamerazine . . . . 0.167 Gm.
Sulfamethazine . . . . 0.167 Gm.

Supplied:
Scored tablets in bottles of 50.
Biosulfa 125M also available in bottles of 500.

® TRADEMARK, REG. U. S. PAT. OFF.

Upjohn

THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

armatinic activated

comprehensive antianemia therapy

armatinic activated

a fresh response, vigorous improvement

armatinic® activated

Vitamin B_{12} plus essential hematopoietic activators

Each Armatinic Activated capsulette contains:

Ferrous Sulfate Exsiccated	200 mg.
Vitamin B_{12}	10 mcg.
Folic Acid	1 mg.
Vitamin C	50 mg.
Liver Fraction 2, N.F. with Duodenum (containing Intrinsic Factor)	350 mg.

Bottles of 100 and 1000.

Also available: **Armatinic Liquid**

THE ARMOUR LABORATORIES
A DIVISION OF ARMOUR & COMPANY · CHICAGO 11, ILL.

Continued from page 62

Department of Pediatric members of the University of Texas Medical Branch, Galveston, were recently given research grants by the National Drug Company, $3,000; Sharp and Dohme, Inc., $6,500; United States Public Health Service, $40,896; Bureau of Home Economics and Human Nutrition of the United States Department of Agriculture, $45,000; National Live Stock and Meat Board, $2,000; and Hoffmann-LaRoche, Inc., $2,000.

Dr. Hamilton Ford, Galveston, was elected secretary-treasurer of the Central Neuropsychiatric Association at its last meeting held in Indianapolis, Indiana.

VIRGINIA

Dr. Donald S. Daniel, Richmond, was elected president-elect of the Southeastern Surgical Congress at its annual meeting held in Birmingham, Alabama, last month.

Dr. Southgate Leigh, Jr., Norfolk, was recently appointed chief surgeon of the Seaboard Air Line Railroad Company.

Richmond Eye, Ear, Nose and Throat Society has elected Dr. L. B. Sheppard, president; and Dr. Charles N. Romaine, secretary-treasurer.

Virginia Society of Pathology and Laboratory Medicine has elected Dr. S. Miles Bouton, Lynchburg, president; Dr. Edward Levy, Norfolk, vice-president; and Dr. George J. Carroll, Suffolk, secretary-treasurer.

American Gynecologic Society will meet in Hot Springs, May 20-22, under the presidency of Dr. Richard W. TeLinde, Baltimore, Maryland.

Dr. W. R. Whitman, Jr., has been appointed assistant chief surgeon of the Norfolk and Western Railway Company with office at Roanoke.

Richmond Academy of General Practice has installed Dr. W. Linwood Ball, president; Dr. F. Elliott Oglesby, president-elect; Dr. Harold I. Nemuth, vice-president; Dr. R. S. Faris, secretary; and Dr. J. C. LeFon, treasurer. Drs. Irwin Rifkin and George G. Ritchie, Jr., were installed directors for two-year terms.

Dr. Victor C. Welch, formerly with the E. I. DuPont de Nemours Company, Waynesboro, has located at the Veterans Administration Hospital, Perry Point, Maryland.

Dr. Herbert A. Porter, formerly of Boisseau, has located at Pocahontas for the practice of medicine.

Dr. James N. Dudley has resigned as commissioner of health of Roanoke to accept a position with the Lovelace Clinic, Albuquerque, New Mexico.

Dr. A. McGarvey Wallace, Gate City, was recently awarded by the Medical Society of Virginia his certificate for fifty years of practice of medicine. He flew his own plane to Roanoke for the presentation.

The new 63-bed Stonewall Jackson Hospital at Lexington was dedicated recently. This hospital, which replaces the Old Jackson Memorial Hospital operated there since 1901, cost $1,110,000.

Lynchburg General Hospital has elected to its staff Dr. L. R. O'Brien, chief of staff; Dr. H. Reese Coleman, vice-chief of staff; Dr. Macey H. Rosenthal, chief of surgery; Dr. George B. Craddock, chief of medicine; and Dr. Richard Hawkins, secretary.

Dr. James H. Fagan and Dr. Esther Fagan, formerly in practice in New York State, have assumed duties as director of the Botetourt-Buena Vista-Lexington-Rockbridge Health District and Alleghany-Bath-Covington-Highland Health District, respectively. Dr. James H. Fagan with headquarters at Lexington, and Dr. Esther G. Fagan at Covington.

Dr. William C. Fritz, recently in practice at Accomac, is director of the Accomac-Northampton Health District with headquarters at Nassawadox.

WEST VIRGINIA

American Dermatological Association will hold its next meeting in White Sulphur Springs, The Greenbrier, April 13-17. Dr. J. Lamar Callaway, Durham, North Carolina, is secretary.

West Virginia Academy of General Practice will hold its annual meeting in Charleston, May 1-2, under the presidency of Dr. J. C. Huffman, Buckhannon.

Dr. Chester R. Ogden, who has practiced medicine in Clarksburg for fifty years was honored with a luncheon by the Lions Club on his 80th birthday.

Dr. R. Moore Dodrill, formerly of Welch, and now a member of the staff of the C. & O. Hospital, Huntington, has been certified by the American Board of Radiology.

Dr. David A. Haught, recently released from service, has reopened offices in Huntington.

in refractory or relapsing cases

ERYTHROMYCIN
the antibiotic of choice against resistant Gram-positive cocci . . .

REINFORCED BY

TRIPLE SULFONAMIDES
to cover Gram-negative bacteria and to potentiate the erythromycin . . .

Each tablet contains:

Erythromycin	100 mg.
Sulfadiazine	0.083 Gm.
Sulfamerazine	0.083 Gm.
Sulfamethazine	0.083 Gm.

Supplied:
Protection-coated tablets in bottles of 50 and 500.

*TRADEMARK

Upjohn

THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

Allen's
INVALID HOME

ESTABLISHED 1890
MILLEDGEVILLE, GEORGIA

For the treatment of
NERVOUS AND
MENTAL DISEASES

Grounds 600 Acres — Buildings, Brick
Fireproof — Comfortable — Convenient

Site High and Healthful

E. W. ALLEN, M.D. — DEPARTMENT FOR MEN
H. D. ALLEN, M.D. — DEPARTMENT FOR WOMEN

Terms Reasonable

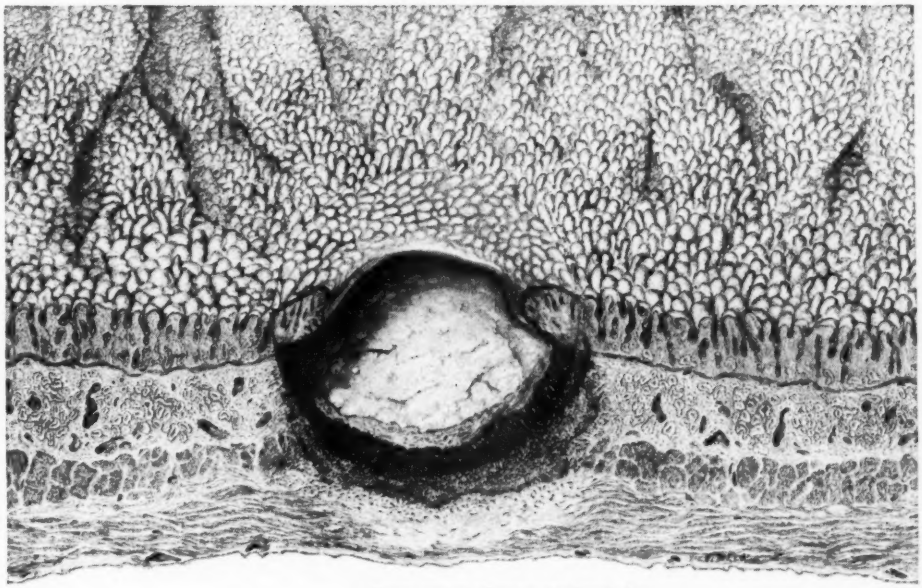
TUCKER HOSPITAL, INC.

212 West Franklin St. (Corner of Madison)

RICHMOND, VIRGINIA

This is a private Hospital for the Neurological practice of Drs. Beverly R. Tucker, Howard R. Masters and James Asa Shield.

The Tucker Hospital is for the treatment of nervous and endocrine diseases. There are departments of massage, medicinal exercises, hydrotherapy and physiotherapy. The Hospital is large and bright, surrounded by a lawn and shady walks, large veranda and has a roof garden. It is situated in the best part of Richmond and is thoroughly and modernly equipped. The nurses are specially trained in the care of nervous cases.



Cross section of active duodenal ulcer.

Dramatic Remission of Ulcer Pain

Pain of ulcer is associated with hypermotility; the pain is relieved when abnormal motility is controlled by Pro-Banthine.®

"In studying[1] the mechanism of ulcer pain, it is obvious that there are at least two factors which must be considered: namely, hydrochloric acid and motility.

"... our studies indicate that ulcer pain in the uncomplicated case is invariably associated with abnormal motility....

"Prompt relief of ulcer pain by ganglionic blocking agents ... coincided exactly with cessation of abnormal motility and relaxation of the stomach."

Pro-Banthine (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is a new, improved, well tolerated anticholinergic agent which consistently reduces hypermotility of the stomach and intestinal tract. In peptic ulcer therapy[2] Pro-Banthine has brought about dramatic remissions, based on roentgenologic evidence. Concurrently there is a reduction of pain or, in many instances, the pain and discomfort disappear early in the program of therapy.

One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthine [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

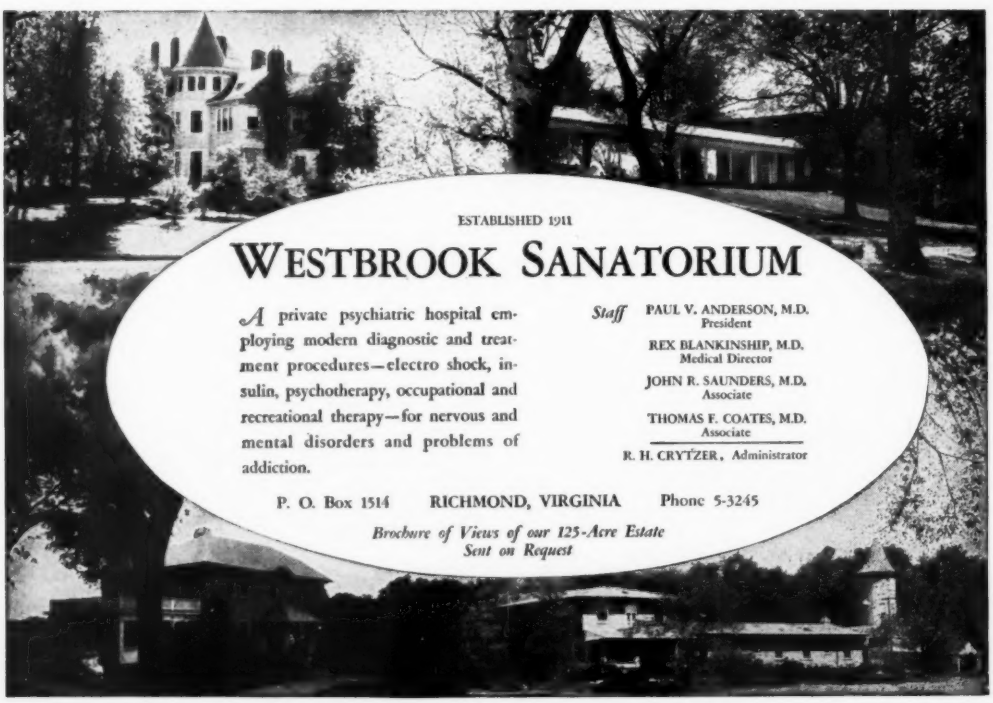
1. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.
2. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

Browne-McHardy Clinic

- Diagnostic and Therapeutic Facilities
- Internal Medicine and Gastroenterology
- Surgery
- Gynecology and Obstetrics
- Radiology—X-ray and Radium therapy
- Laboratory and Research Departments
- Urology
- Endoscopy
- Otolaryngology-Ophthalmology
- Neuropsychiatry
- Hotel facilities available

3636 ST. CHARLES AVENUE

Phone TYler 2376 • ***New Orleans, La.***



ESTABLISHED 1911

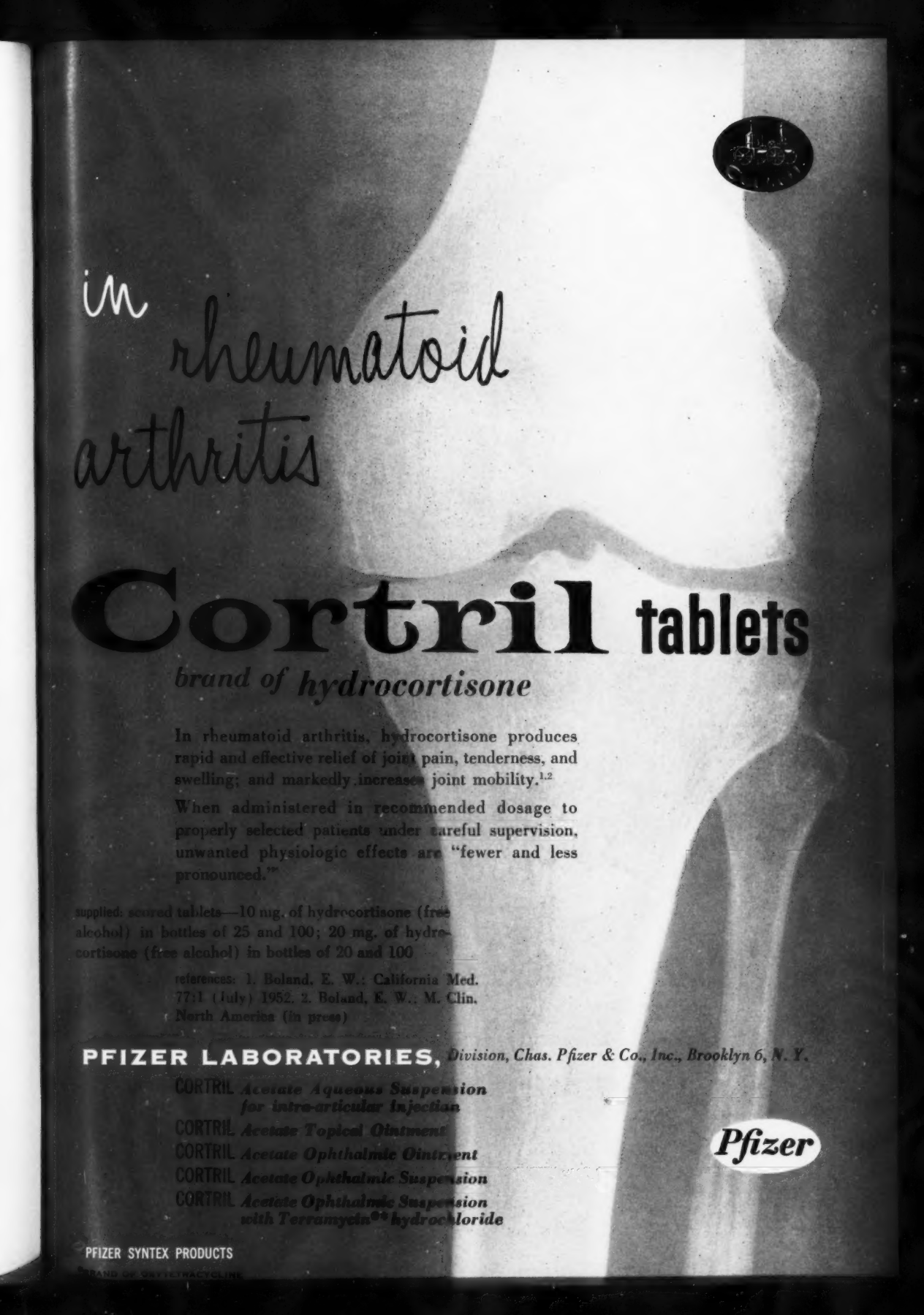
WESTBROOK SANATORIUM

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff
PAUL V. ANDERSON, M.D.
President
REX BLANKINSHIP, M.D.
Medical Director
JOHN R. SAUNDERS, M.D.
Associate
THOMAS F. COATES, M.D.
Associate
R. H. CRYTZER, Administrator

P. O. Box 1514 RICHMOND, VIRGINIA Phone 5-3245

Brochure of Views of our 125-Acre Estate Sent on Request



Cortril tablets

brand of hydrocortisone

In rheumatoid arthritis, hydrocortisone produces rapid and effective relief of joint pain, tenderness, and swelling; and markedly increases joint mobility.[1,2]

When administered in recommended dosage to properly selected patients under careful supervision, unwanted physiologic effects are "fewer and less pronounced."

supplied: scored tablets—10 mg. of hydrocortisone (free alcohol) in bottles of 25 and 100; 20 mg. of hydrocortisone (free alcohol) in bottles of 20 and 100

references: 1. Boland, E. W.: California Med. 77:1 (July) 1952. 2. Boland, E. W.: M. Clin. North America (in press)

PFIZER LABORATORIES, *Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.*

CORTRIL *Acetate Aqueous Suspension for intra-articular injection*
CORTRIL *Acetate Topical Ointment*
CORTRIL *Acetate Ophthalmic Ointment*
CORTRIL *Acetate Ophthalmic Suspension*
CORTRIL *Acetate Ophthalmic Suspension with Terramycin** hydrochloride*

Pfizer

PFIZER SYNTEX PRODUCTS

**BRAND OF OXYTETRACYCLINE

in oral penicillin therapy

rely on the

Eskacillin* *line for*

- *greater solubility*
- *rapid absorption*
- *higher blood levels*

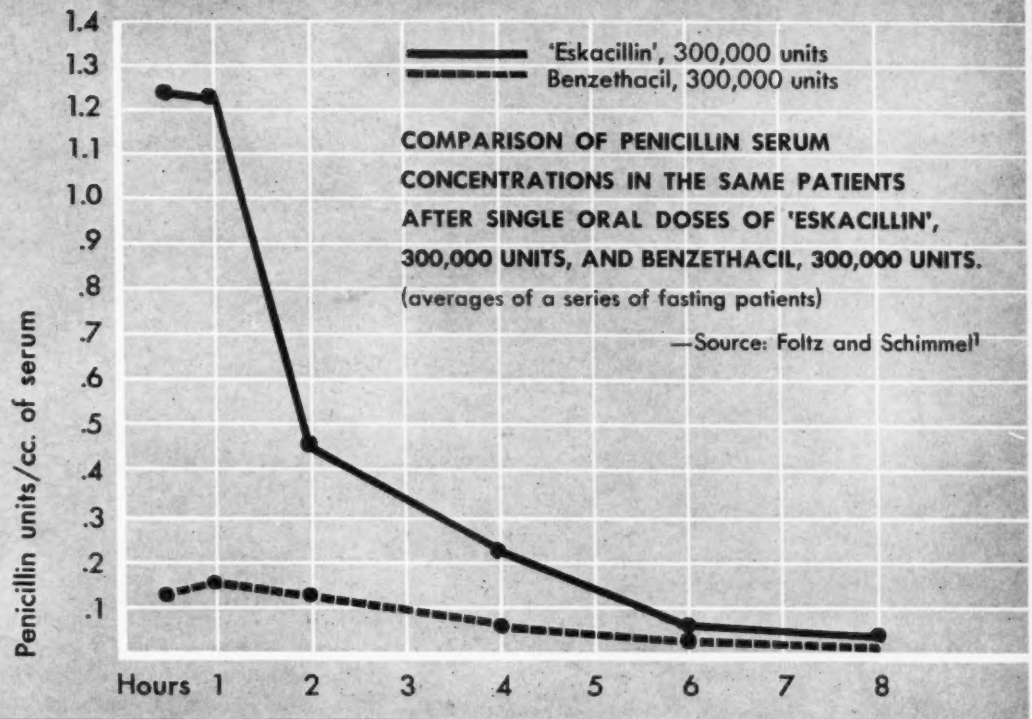
Because they are readily soluble in gastric juice, the 'Eskacillins' are more readily absorbed than benzethacil and the other highly insoluble oral penicillin salts. Consequently, the 'Eskacillins' produce far higher peak blood levels.

These high serum concentrations diminish only gradually. According to Foltz and Schimmel,[1] therapeutic levels often persist for as long as 12 hours. In a recent study of 308 infants and children with various infections, Huang and High[2] found the 'Eskacillins' *fully effective when given at 12-hour intervals.*

1. Foltz, E.L., and Schimmel, N.H.: Comparison of Orally Administered Penicillins, Antibiotics & Chemotherapy 3:593 (June) 1953.
2. Huang, N.N., and High, R.H.: Effectiveness of Penicillin Administered Orally at Intervals of Twelve Hours, J. Pediat. 42:532 (May) 1953.

Smith, Kline & French Laboratories, Philadelphia

*T.M. Reg. U.S. Pat. Off.



the 'Eskacillins'	*per 5 cc. teaspoonful*
'Eskacillin 50'	50,000 units potassium penicillin G
'Eskacillin 100'	100,000 units potassium penicillin G
'Eskacillin 250'	250,000 units procaine penicillin G
'Eskacillin 500'	500,000 units procaine penicillin G
'Eskacillin 100-Sulfas'	100,000 units potassium penicillin G plus a total of 0.5 Gm. (0.167 Gm. each) of three sulfonamides (sulfadiazine, sulfamerazine, sulfamethazine)
'Eskacillin 250-Sulfas'	250,000 units procaine penicillin G plus a total of 0.5 Gm. (0.167 Gm. each) of three sulfonamides (sulfadiazine, sulfamerazine, sulfamethazine)

NEW

improved treatment of bronchial asthma with

mùdrane

a standard formula plus KI

Many investigators[1, 5, 6, 7, 8] have reported on the value and importance of potassium iodide in relieving the distress of bronchial asthma by liquefying and promoting expectoration of the viscid mucus plugs that block the air passages. Now KI has been incorporated with a standard formula in the treatment of bronchial asthma to give you Mudrane.

Here is the Clinically Tested Balanced Formula for Each Mùdrane Tablet

Aminophylline	130 mg. (2 gr.)
Ephedrine HCl	16 mg. (¼ gr.)
Phenobarbital	21 mg. (⅓ gr.)
Warning: May be habit-forming	
Potassium Iodide	195 mg. (3 gr.)

Scored tablets in bottles of 36 and 100.

Effective Dosage

ADULT: One tablet of Mùdrane, with full glass of water, 3 or 4 times daily.

CHILDREN: ½ tablet.

A Few Precautions

Mùdrane should be used cautiously in vascular, heart or thyroid disease. It should not be used in tuberculosis.

Send For Trial Supply of Mùdrane and Note These Effects

Mùdrane dilates the bronchioles with aminophylline and ephedrine.[1, 2, 3, 4] Mùdrane liquefies mucus plugs with potassium iodide.[1, 5, 6, 7, 8] Mùdrane calms the patient with a slight excess of phenobarbital.[3, 4]

Bibliography

1. *Barach, A. L., J.A.M.A.; 147:730-7*
2. *Bastedo, W., Pharmacology, Therapeutics and Prescription Writing, 5th Ed.*
3. *Goodman & Gilman, The Pharmacological Basis of Therapeutics*
4. *Feinberg, S. M., in Modern Treatment, Austin Smith & Paul Wermer*
5. *Rackemann, F. M., in Textbook of Medicine, Cecil & Loeb, 8th Ed.*
6. *Feingold, B. F., J.A.M.A.; 146:319-23*
7. *Tuft, L., J.A.M.A.; 146:1480-86*
8. *Banyai, A. L., J.A.M.A.; 148:501-4*

Poythress & Co., Inc.

Richmond, Virginia

A safer tranquilizer-antihypertensive
No other rauwolfia product offers such
Unvarying potency / Accuracy in dosage / Uniform results
T.M.
Serpasil
(reserpine Ciba)
A pure crystalline alkaloid of Rauwolfia serpentina
CIBA
Tablets 0.25 mg. and 0.1 mg.

facts

● **Morgan**
. . . cathartics are too frequently resorted to, with the result that habitual constipation is established.

● **U. S. Dispensatory**
Bile has a mild laxative action . . .

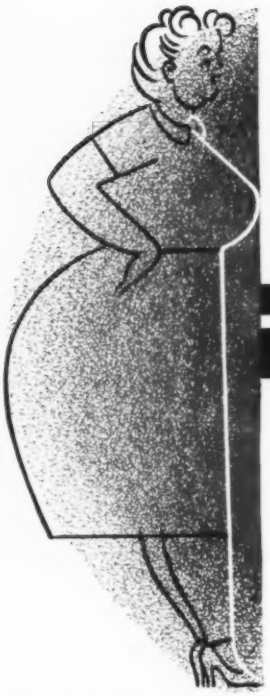
● **Lichtman**
Bile may be considered a physiologic laxative.

. . . evacuation without habituation

DOXYCHOL-K

Samples from Geo. A. Breon & Co., 1450 Broadway, New York 18, N. Y. Each tablet contains Ketocholanic acids (3 grs.) and Desoxycholic acid (1 gr.).

• Morgan, W.G.: Tice Practice of Medicine, W.F. Prior Co., Vol. 7, 1944, p.670.
• U.S. Dispensatory, 24th ed.: 807(1947).
• Lichtman, S.S.: Diseases of the Liver, Gallbladder and Bile Ducts, ed. 2, Phila., Lea & Febiger, 1949, p.963.



in any case of OBESITY

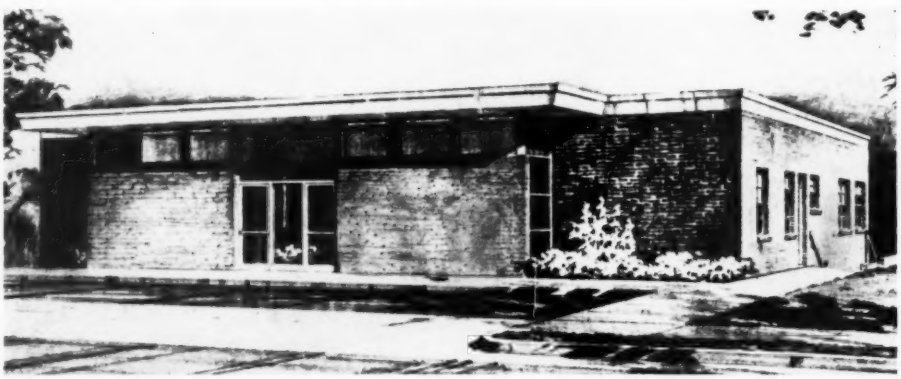
with low-reserve thyroid. Mild thyroid deficiency "is a fairly common condition . . . characterized by weight gain, lassitude, brittle fingernails, coarse hair and . . . menstrual abnormality."[1] In this condition, accompanying thyroid medication may be of distinct help to the dietary regimen in reducing the patient.[2]

thyrar®

Thyrar is prepared exclusively from beef sources and provides whole gland medication at its best. Superior uniformity is assured by chemical assay and biologic test.
Supplied: Tablets of ½, 1 and 2 grains. Bottles of 100 and 1000.
Standardized equivalent to thyroid U. S. P.

1. Buxton, C. L., and Vann, F. H.: New England J. Med. 236: 536, 1948.
2. Cushney, A. R.: Textbook of Pharmacology and Therapeutics, ed. 10, Philadelphia, Lea & Febiger, 1943, pp. 436-437.

THE ARMOUR LABORATORIES
A DIVISION OF ARMOUR AND COMPANY · CHICAGO 11, ILLINOIS



Friedman Diagnostic Clinic

COMPLETE DIAGNOSTIC SERVICE

Internal Medicine — Diseases of the Chest — Pneumoconioses

1906 Ninth Avenue South Phone 54-3324 Birmingham, Alabama

CARROL TURNER SANATORIUM

MEMPHIS, TENNESSEE, ROUTE 10, BOX 288

For the Diagnosis and Treatment of Mental and Nervous Diseases

Located on the Raleigh-LeGrange Road, five miles east of the city limit —accessible to U. S. Highway 70 (Bristol Highway)

Situated on a sixty-six acre tract of wooded land and rolling fields, the environment is conducive to amelioration of the symptoms of emotionally disturbed patients

Modernly equipped with adequate facilities for physical and hydrotherapy, electroshock, and insulin therapy

Special emphasis is laid on recreational and occupational therapy

Adequate nursing personnel assures individual attention to each patient

The main building and hospital department of the Sanatorium is shown above

FAIRFIELD

Our convalescent home is located on the Sanatorium Grounds

The home is especially designed and fitted for the cure of elderly people.

on every count Superior
vitamin supplements for infants

- Superior flavor
- Superior stability
- Superior miscibility
- Superior convenience
- Superior hypoallergenicity

Exceptionally pleasant "taste tested" blend of flavors carefully protected during manufacture . . . no unpleasant aftertaste . . . readily accepted without coaxing.

Outstanding stability is achieved by Mead's specially developed solution. Poly-Vi-Sol and Tri-Vi-Sol require no refrigeration . . . no expiration dates on labels—and may be safely autoclaved with the formula.

Both disperse instantly in formula, fruit juice or water . . . mix easily with Pablum cereal and other foods.

Light, free flowing . . . no mixing necessary . . . calibrated droppers assure easy, accurate dosage. For infants, drop directly into the mouth. For children, measure into a spoon.

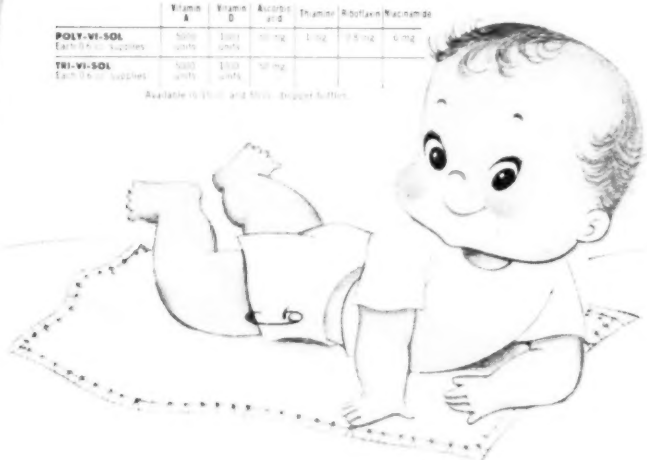
Poly-Vi-Sol and Tri-Vi-Sol supply crystalline vitamins in a completely hypoallergenic solution.

Poly-Vi-Sol
SIX ESSENTIAL VITAMINS FOR DROP DOSAGE

Tri-Vi-Sol
VITAMINS A, D AND C FOR DROP DOSAGE

	Vitamin A	Vitamin D	Ascorbic acid	Thiamine	Riboflavin	Niacinamide
POLY-VI-SOL	5000 units	1000 units	50 mg.	1 mg.	0.5 mg.	6 mg.
TRI-VI-SOL	5000 units	1000 units	50 mg.			

Available in 50 cc. and 15 cc. dropper bottles.



MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA, U.S.A. MEAD

hard-hitting antibiotic

ILOTYCIN

(Erythromycin, Lilly)

especially for staphylococcus, streptococcus, and pneumococcus infections

DOSAGE FORMS:

Tablets 'Ilotycin,' 100 and 200 mg. Average dose: 200 mg. every four to six hours.

'Ilotycin'

(Erythromycin, Lilly) ETHYL CARBONATE

Pediatric

100 mg. of 'Ilotycin' (as the ethyl carbonate) per teaspoonful (5 cc.)

AVERAGE DOSE:

Thirty-pound child: One teaspoonful every six hours.

Adults: Two teaspoonfuls every four hours.

IN 60-CC. BOTTLES

ELI LILLY AND COMPANY, INDIANAPOLIS 6, INDIANA, U. S. A.

puts the
patient
in the mood
for recovery

AMPHEDASE*

KAPSEALS®

**new antidepressant
and nutritional adjunct**

AMPHEDASE supplies support needed to help speed recovery and secure patient cooperation. AMPHEDASE is especially helpful in patients with asthenia and depression and during convalescence. It is valuable in geriatric therapy, in obesity, and in patients with faulty nutrition and digestion.

Detailed information on AMPHEDASE will be mailed on request.

Each AMPHEDASE Kapseal contains

d-amphetamine sulfate	2.5 mg.
Nicotinamide	25.0 mg.
Thiamine hydrochloride	5.0 mg.
Ascorbic acid	50.0 mg.
Taka-Diastase®	300.0 mg.

Supplied in bottles of 100 and 500 Kapseals.

*TRADE MARK

Parke, Davis & Company
DETROIT, MICHIGAN